University of Alberta

Preserving the Essence of Man in Women's Athletics: Discourses of Testosterone and Transsexual Sport Policy

by

Lisa Dawn Bavington ©

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ABSTRACT

This thesis explores the social production of testosterone as the 'male-sex' hormone in Western culture through an examination of public discourses surrounding transsexual athletes, whose entrance into areas of high-performance sport is regulated by the Stockholm Consensus, also known as the International Olympic Committee (IOC) Transsexual policy. I examine how discourses of testosterone produce differential effects that unfairly hinder women's full athletic participation by constructing testosterone as the 'natural' arbiter of sexual difference, performance advantage, and gender identity. I conclude that testosterone acts as part of a disciplinary regime to maintain the seemingly 'unnatural' relationship between women and testosterone in order to uphold the 'natural' athletic superiority of the male-sexed body, given the considerable investments in maintaining gendered boundaries between male and female athletes.

Table of Contents

CHAPTER 1 **1**

INTRODUCTION 1
Research Question 2
Theoretical Framework 4
Feminisms 6
Methodology 8
Textual Analysis 9
Background 10
The Sex/Gender Problematic 11
Literature Review 13
Transsexual Sporting Bodies 14
Testosterone 16
Chapter Organization 18

CHAPTER 2 **21**

TESTOSTERONE AND ELIGIBILITY 21
IOC Policy 23
Essential Difference 26
Gender-affected sport 30
Inclusion/Exclusion 32
Switching Gears 36
Category 38
Keelin Godsey 42
Liberal (Sport) Feminism 44
The Foundation Position 45
Female Athletes 48
Sex Segregation 49

CHAPTER 3 **52**

TESTOSTERONE AND ADVANTAGE 52
IOC Policy 53
Advantage 54
Disadvantage 58
Female-to-Male 65
Performance-enhancement vs. Therapeutic use 69
Transition as a Performance-Enhancement 71
Philosophy of Separate Development 74
Gendering the Gap 76
Final thoughts 84

CHAPTER 4 **87**

TESTOSTERONE AND IDENTITY 87
IOC Policy 89
Structured Narratives 91
Writing the 'wrong' body 96
Identity/Difference 98
Own(ing) the Podium 100
Testosterone is Destiny 102
Biology is (not) destiny 111
Women' in Sport 112
Radical feminism 113
'Real' Women in Sport 116

CHAPTER 5 **118**

SUMMARY AND CONCLUSION 118
Segregation is Segregation 118
Muscle is NOT a male secondary sex characteristic 121
Women's sport is not a 'women's-only' space 124
Missing in Action 126
Final Thoughts 129
Future Research 130

REFERENCES 132

Chapter 1

Introduction

In 1994, Pat Connolly wrote an article for the *New York Times* titled "Removing the essence of man from women's athletics." In it, she revealed her strong suspicions that China's female runners and swimmers were using 'male' hormones, as East Germans had been accused of doing in past years. For her, the poor results turned in by China's male athletes, with presumably the same genes, training and nutrition as their female counterparts, acted as clear evidence of this. Connolly argued that different testing standards were needed to determine the use of this banned substance by female competitors and claimed that the *essence* of man, testosterone, was tainting women's athletic competition. However, removing this essence may be a practical impossibility, given that testosterone is 'naturally' present in all human bodies. Thus, Connolly's claim that the presence of testosterone[1] in women's sport is detrimental for female participants is unfounded: "the essence" of man is neither male nor female, but both.[2]

In the world of high-performance sport, testosterone occupies a mythical status as the primary 'male-sex' hormone (Hoberman, 2005) and assumes a symbolic, and often literal, identification with all things masculine, implying that gender differences owe more to biology than we would like to believe (Sullivan, 2000). The social production of this physical reality is representative of larger cultural assumptions in which "testosterone equals male" and the "absence of testosterone equals female" is rooted in the notion of

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[1] Although both male and female athletes use a variety of drugs to enhance sport performance, I will use either 'testosterone' or 'steroids' to refer to the specific class of compounds known as anabolic-androgenic steroids and their derivatives, which are generally thought to cause the formation of male secondary sex characteristics in the human body, among other things.

[2] Any reference to testosterone being the "essence" of man and/or sport performance in this thesis is not a claim I support, but one that I have identified as a major contributor to this discourse.

"female as lack" (Fausto-Sterling, 2000, p. 81). Athletes who use testosterone and its derivatives, the anabolic-androgenic steroids, for the purpose of performance-enhancement are said to engage in the unnatural practice of doping. However, the discourse surrounding testosterone use in sport is differently gendered. For female athletes, who participate in a (sporting) culture where the perceived absence of testosterone in the female body is linked directly to the cultural myth of women's athletic inferiority, use of the 'male-sex' hormone produces them as athletes who transgress the sexed and/or gendered boundaries of mainstream sport. These specific discursive battles over the use of testosterone by women in sport and their wider cultural significance will act as the starting point for this project.

Research Question

Over the years, sport researchers have posed a number of challenges to the way that sport, as a cultural institution, has responded to the shifting identities of its female participants. Although feminists have continued to argue for equality of opportunity, equitable division of resources, and fair representation in athletic contexts, among other things, sport remains a "crucial cultural domain for constructing and reproducing dominant gender relations in favour of both heterosexual and masculine identities" (Giulianotti, 2005, p. 80). As such, academics have been particularly interested in those female athletes whose rejection of normative beauty ideals (feminist resistance) appear to lie in contrast with their compliance in the trappings of womanhood (feminine recuperation). When, in 1991, Marcia Ian asked, "In what other sport could a female competitor be expected to limit her achievement for fear of losing her proper gender" (p. 3), she was referring to the sport of bodybuilding. Although the aesthetic requirements

for these female athletes may be unique in terms of bodily physical appearance, her assertion that bodybuilding is the only sport that relies upon feminine gender norms to prohibit women from developing their full physical potential is an oversight. While the competitive female bodybuilder's physique is perhaps the most visible site of a perceived battle between natural sex and normative gender, traditional gender codes work throughout women's sport to dissuade female motivation towards the type of muscular development connected to masculinization (Giulianotti, 2005).

My project will explore the social production of testosterone as the 'male-sex' hormone in Western culture and identify its discursive effects. I analyze the ways in which the traditional sex/gender regime continues to operate in and through athletic bodies, providing insight into the seemingly unnatural relationship between women and testosterone, which I argue, reveals itself as a lie. In Western sporting contexts, the artificial mix of women and the 'male-sex' hormone often produces a cultural intolerance towards those women who, by chance or by choice, lack the embodied ability to display normative feminine prescriptions. I argue that discourses of testosterone produce differential effects that unfairly hinder women's full athletic participation. By making use of particular messages that discipline female athletes to place a greater value on a feminine gender performance rather than a successful sporting performance, women in sport are taught to fear the 'natural' association with all things masculine.

To make these arguments, I examine public discourses around transsexual[3] athletes, whose entrance into areas of high-performance sport is regulated by the

[3]. To remain consistent with the use of the term transsexual by the IOC, this project will consider a transsexual athlete to be an individual who has undergone both sexual reassignment surgery and hormone replacement therapy, in an effort to adopt the physical and physiological characteristics of the opposite sex (Reecer, 2005), which renders them eligible for participation in their preferred gender.

Stockholm Consensus, also known as the International Olympic Committee (IOC) Transsexual policy. The defining purpose of this policy, I will argue, is to normalize the presence and absence of testosterone in the male and female body respectively, which establishes a link to the cultural myth of female athletic inferiority, previously tied to a 'lack' of a penis and/or Y-chromosome. As such, the IOC maintains the integrity of a two-sex system among differently gendered participants by constructing testosterone as the 'natural' arbiter of sexual difference, performance advantage, and gender identity. The central question this research project will explore is whether it is fair to allow male-to-female athletes to compete against women in sport who were born-female? In the sections that follow, I outline the theoretical frameworks that inform my research and explain my methodological approaches in order to deconstruct the role testosterone plays in the logic of sex segregation, rationale behind the gendered performance differential between the sexes, and the identity 'real' women in sport.

Theoretical Framework

Interdisciplinary Cultural Studies has emerged as the "most influential theoretical and research paradigm within sport studies" (Giulianotti, 2005, p. 43), where scholars examine the social construction of cultural practices that shape all aspects of social life. This area of analysis is concerned with how sporting practices create cultural meanings and their pivotal role in establishing differential power and privilege in society. In his book *Introducing Cultural Studies*, Ziauddin Sardar (1999) identifies five main characteristics of cultural studies which relate directly to my project. It:

> a) aims to examine its subject matter [*testosterone*] in terms of cultural practices [*sport*] and their relation to [*gendered relations of*] power; b) has the objective of understanding [*sporting*] culture in all its complex forms and of analyzing the social and political context [*International Sport*

> *Policy*] in which culture [*sporting*] manifests itself; c) is both the object of study [*sport studies*] and the location of political criticism and action [*feminism*]; d) attempts to expose and reconcile the division of knowledge, to overcome the split between tacit (cultural knowledge) [*stereotypes & myths*] and objective (universal) [*scientific fact*] forms of knowledge and; e) has a commitment to an ethical evaluation of modern society [*use of testosterone for sport performance*] and to a radical line of political action [*feminist and critique of sport feminist positions*] (*emphasis* in square brackets mine).

There is an increasing body of critical feminist research in sport informed by these aspects of cultural studies, which focuses specifically on the interaction of gender and culture, and interrogates the way that social practices construct sex and/or gender difference. Some sport scholars advocate using a feminist cultural studies approach to enhance our understanding of the conflicted relationship female athletes have to sport both as a social and cultural institution and social construct (Cole, 1994; Hall, 1996; Hargreaves, 1990; Markula, 1995). In particular, feminist researchers ask how "texts produce and/or reproduce ideologies that affirm presumed sexual differences and inequalities of social power" (Plymire, 2005, p. 143). My project lends itself to an analysis that builds on cultural studies, using critical theories of feminism, among others, in what can be referred to as "reading sport critically" (McDonald and Birrell, 2000).

In "Resisting the Canon: Feminist Cultural Studies, Sport, and Technologies of the Body," Cole (1994) argues that contemporary critical theories as well as shifts in culture have produced a crisis in sport studies by displacing and challenging the object of knowledge as it has been traditionally understood by the field. In response to this crisis, Cole proposes a using a feminist cultural studies theoretical framework that recognizes "sport" as a...

> Discursive construct that organizes multiple practices (science, medicine, technology, governing institutions, and the media) that intersect with and

> produce multiple bodies (raced, sexed, classed, heterosexualized, reproductive, prosthetic, cyborg, etc.) embedded in normalizing technologies (classification, hierarchization, identity production) and consumer culture" (p. 6).

Together with the application of cultural control of women's physicality, this framework will be useful to examine how power relations embedded in technology and science produce the terms of cultural practice. Further, this framework considers how knowledge athletes deploy in their everyday lives contributes to the formation of identities, which reproduces, rather than challenges deeply rooted belief systems.

Feminisms

Hargreaves (1990) contends that "analyses regarding the gendered sporting body tend to focus on the differences between men and women in sport, rather than on the relations [of power] between them" (p. 287). Feminist arguments concerning sport often rely on the male/female distinction to make a case for equality of opportunity (liberal feminist ideology); the philosophy of separate development (separatist feminist ideology); and the concern for qualitatively different models of sport for both sexes (radical feminist ideology), among others (Hargreaves, 1990). For example, the "classic sport story" in which female athletes participate in an individualistic, highly "competitive, and inherently violent, male-oriented sporting environment," is often viewed in a negative light when compared to the inherently "kinder, more gentle version" of sport for women (Heywood and Dworkin, 2003, p. 9). These kinds of views support a separate, but equal version of female athletic development, and participation that occurs alongside men's sport, but remains segregated into a 'women's-only' space. Such practices constitute a failure of feminism to challenge some of its own primary core assumptions associated with masculinity and has the effect of relegating female athletes

to an inferior space in which they are produced as different from male athletes, but not from each other.

I do not share the essentialism of separatist or radical versions of feminism, which argue for a female sporting counterculture where male values are exorcised and female values nurtured (Hall, 1996). I also do not believe that equality of opportunity and equitable division of resources leads to anything other than a separate, but unequal model of sport participation. These 'natural' distinctions between male and female versions of sport, I will argue, do not actually exist, but are rather discursively produced, through a complex interaction of gendering in everyday sporting practice. As such, I stand opposed to theories that attempt to justify discriminatory practices based upon sexist ideologies that claim that inherent differences (or otherwise) between the sexes are 'natural' and reflective of an 'essence' that explains and/or justifies their subordination. My project does not seek to question if a "conflict between gender and (sporting) culture exists" (Hall, 1996), but the manner in which difference is reproduced to ensure that women remain outsiders in mainstream sport.

My research investments are feminist, critical, and anti-foundational, in the sense of understanding reality as constituted through performatives that are distinctly gendered, rather than originating or finding an existence elsewhere (Butler, 1999). The type of feminism I wish to lay claim to in this project is closely associated with a radical attack on notions of universal truth and objective reality, which are themselves socially constructed through subject positioning and discourse(s) of legitimation. I understand feminism to be part of the political goal of opposing and rectifying oppression, committed to transforming both representation and actual social relations (Sykes,

Chapman, and Swedberg, 2005). This project appears to have much in common with a radical-libertarian feminist critique of sport given the choices I have made to remain consistent with the terms that dominate the discourse. However, it is not my intent to privilege a normative masculine model of sport participation, only to show how the logical conclusion of arguments surrounding eligibility, advantage, and identity actually supports outcomes that are highly problematic.

Methodology

Feminist researchers have been attracted to the work of Michel Foucault to highlight how human bodies are constructed through a variety of discourses (Hall, 1996) and understand how relations of power, knowledge, and discipline shape the human sporting body (Shogan, 1999). My interest in Foucault is structured around his use of discourse analysis, which operates under the assumption there are necessary limits to what can or cannot be said about a field of knowledge at specific historical moments, in which particular disciplines present meanings and truths (and what counts as meanings and truths), as obvious (Foucault, 1980). It also attempts to identify those values, knowledges, and relations of power that have, over time, become common, acceptable and naturalized features of discourse (Teo, 2000). Utilizing this methodology will allow me to examine many taken-for-granted assumptions that appear to be common sense, natural, and normal, within the discourses of testosterone and transsexualism in sport. By revealing the hidden (and not so hidden) agendas and motivations within the culturally dominant discourse, it is my intention to make explicit the assumptions that enable and perpetuate opposition to the use of testosterone by female participants.

I have selected this method over others because I am interested in how gendered status is maintained through discourses of sexual difference, how social practices are discursively shaped (Foucault, 1980), and the subsequent effects of those social practices on the production of differently gendered bodies. I am concerned with how subject positions are constructed and identities are produced and maintained, particularly how women's sport participation is normalized in traditional ways. To excavate the 'grand narrative' of this particular discourse, I will examine those discursive representations involving transsexual athletes that position the masculinized female athletic body "as a border case" and, as such, under suspicion (Cole, 1994, p. 20). It is my belief that the discursive effects of these normalizing discourses also have larger implications for female athletes in general whose bodies are gendered and disciplined in and through naturalized imperatives. As such, Western sporting culture exists as a site where perspectives on testosterone use are continuously being (re)constructed in relation to the (apparent) gender of the participants.

Textual Analysis

In addition to the IOC policy (IOC, 2004) and the UK Guidance (UK Sport, 2005), data for this study was obtained through a combination of media texts that focused on the discourse of transgender participation in sport, in general, and transsexual athletes, in particular. This includes film and television documentaries, interviews, and radio transcripts; autobiographies and personal narratives published in books, magazine and newspaper articles (online and in-print); personal websites and various web blogs. These texts were analyzed individually at first, and then grouped into themed categories of eligibility, advantage, and identity. The purpose of using textual analysis is to

demonstrate how media texts: 1) presume that testosterone is the sole determinant of athletic success, which produces male-to-female athletes in possession of an 'unnatural' performance-enhancement not made available to 'real' women; 2) encourage readers to assume that testosterone acts as an 'artificial' substance to the female body, which disrupts the present gender order (Davis and Delano, 1992); and 3) question the sexual legitimacy of transsexual athletes (whether they are 'real' men or women), which obscures the broader political and social relations of power by reproducing, rather than challenging dominant gender ideologies (Birrell and Cole, 1990).

Background

Efforts to determine the sexual identity of female athletes began as a way to prevent men from competing in women's sport apparently to ensure fair competition and the safety of female participants. The fear of the so-called 'male imposter' has produced a number of gender verification strategies aimed at confirming the 'femaleness' and/or 'femininity' of female participants. Official procedures have ranged from the physical inspection of the external genitalia (1966 European Track and Field Championships), to sex chromatin testing using cells scraped from the cheek membrane (1968 Olympic Games in Mexico City), and genetic-based testing (1992 Albertville Winter Olympics) to determine the absence or presence of DNA sequences on the Y chromosome (Reecer, 2005). These tests have been criticized for the potential harm[4] they posed to female athletes and the fallibility of the results. As a result, female athletes who present variations in external genitalia, chromosomal makeup, or sexual ambiguity were no

[4] Some women's careers were destroyed if they failed the test. Polish sprinter Ewa Klubukowska and Spanish hurdler Maria Patino are two such cases. Both were barred from international competition after their DNA tests revealed the presence of a Y chromosome. They were stripped of their medals and had their world records revoked. They each faced public ridicule for the revelation that they were not 'women' (Nell-Warren, 2003).

longer subject to gender verification procedures to compete in the women's category at the elite level. However, the IOC has only suspended these tests on a trial basis only (Cole, 2000) and reserves the right to reapply any testing methods "in any individual case that is brought to their attention" (Nell-Warren, 2003, p. 7).

Following Anne Fausto-Sterling (2000), one of the major claims I will make in this project is that labeling someone a 'man' or a 'woman' is a purely social decision. She argues:

> We may use scientific knowledge to help us make the decision, but only our beliefs about gender - not science - can define our sex. Furthermore, our beliefs about gender affect what kinds of knowledge scientists produce about sex in the first place (p. 3).

These scientific-based links between sex and gender operate as a theory of natural difference (Hood-Williams, 1995) and rely heavily on the sex/gender problematic.

The Sex/Gender Problematic

Typically when sex and gender are not used interchangeably, 'sex' refers to the biological (chromosomes, genitals, and hormones) or physical state of being male or female, and 'gender' refers to the social status of being a man or a woman (Parkinson, 2004). However, the influence of feminist and poststructuralist thinking has been one of the key driving forces behind the sex/gender problematic (Barrett and Phillips, 1992), which has seen a dramatic shift in conceptual understandings of 'gender' as distinct from 'sex' (Butler, 1999). Rather than biological 'sex' being the fixed marker of identity, 'gender' recognizes that identity is more fluidly experienced and articulated. Although the IOC policy enables individual athletes to change their sex, it assumes a sex and gender binary that acknowledges only male and female identity categories, which keeps male/female poles of the existing structure firmly intact. Not only does this discriminate

against athletes who do not have the financial resources to complete the process of transition, among others, but it continues to marginalize both the experiences and subjectivities of gender diverse people, as such, is unable to account for the full spectrum of gender diversity (Hines, 2007).

Given that usage of terms such as sex, gender, and identity varies widely according to which media text, sport governing body, and area of research (scientific or sociological, for example) being analyzed in relation to transsexual athletes, maintaining consistency within this discourse is difficult. Therefore, for the purposes of clarity, I will use 'sex' and 'gender' as biological and sociological constructs respectively. As such, I will also use sexual reassignment surgery (SRS) rather than gender reassignment surgery (GRS), given that surgical changes and hormone therapy are the required conditions of participation mandated by the IOC. I have made these choices, over others, to remain consistent throughout this project and understand that this creates a number of effects, which are problematic. However, by reproducing the terms used in this discourse, my aim is to show how they inevitably fail and to support a later claim that the IOC policy is misrepresented as a transgender policy, although individuals who meet the eligibility requirements may identify themselves as such. The IOC policy contains any potential threat transsexual athletes pose to the sex/gender system by forcing them to conform to becoming a 'man' or a 'woman' for the purposes of sport participation and thus it appears more progressive than it actually is. My own views are that sex is no less of a discursive construction than gender (Butler, 1999) and as such, "there will never be a true sign of a true sex, whatever the hopes of the IOC" (Hood-Williams, 1995, p. 290).

Literature Review

The issue of transsexual participation in areas of high-performance sport began in 1990 when the question of post-pubertal[5] transsexual athletes was first considered at the Workshop on Methods of Femininity Verification convened by the International Association of Athletic Federations (IAAF) in Monaco (Ljungqvist and Genel, 2005). The guidelines that developed out of this workshop would not be reviewed again until October 2003. With the cessation of laboratory-based genetic screening procedures involving female athletes at the 2000 Olympic Games in Sydney, Australia (Ljungqvist and Genel, 2005) new policies were needed for gender verification to uphold the IOC's promise of a safe and fair competitive environment for all athletes. The best way to accomplish this task, accordingly, was to ensure that competition between men and women remained competition between 'men' and 'women.'

Up to and including this time, transsexual athletes were barred from competing in the Olympics. Using the available medical and scientific knowledge at the time, the IOC's executive board approved a policy, known as the Stockholm Consensus, which effectively filled that void. It established the conditions under which athletes who have changed sex could participate alongside their peers. This policy was in place for the 2004 Olympic Games in Athens, Greece. Since the IOC policy went into effect in 2004, the following organizations have followed suit: the Ladies Golf Union (Great Britain), the Ladies European Golf Tour, Women's Golf Australia, the United States Golf Association, USA Track and Field, and the Gay and Lesbian International Sports Association (Griffin, 2005).

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[5] Post-pubertal transsexual athletes are those individuals who have transitioned from male-to female after puberty.

In 2005, UK Sport published a document called "Transsexual People and Sport: Guidance for Sporting Bodies," the purpose of which is

> To assist those involved in running or administering organised and competitive sport in the United Kingdom to deal with the very special set of circumstances that transsexual people present...the guidance seeks to make individuals and governing bodies aware of the legal framework with regard to transsexual people and to provide some practical suggestions on best practice in this area (pp. 3-4).

Although the timing and publication of this document appears to be directly related to the IOC policy, it is actually a result of a sport governing body (UK Sport) seeking exemption from the legal recognition and protection of transsexual rights (Gender Recognition Act, United Kingdom Government, 2004) within the context of mainstream sport. The UK Guidance instructs both competitive and recreational sport organizations in the UK that transsexual athletes do not have the *automatic right* to compete in their preferred gender in those sports which are 'gender-affected'[6] (Sykes, 2006). For the remainder of this thesis, I will refer to the Stockholm Consensus as the IOC policy and the UK Sport publication as the UK guidance. This thesis will elaborate on how both of these official documents reveal the biological and socio-cultural ways in which our system of sex/gender works to naturalize women in sport (Birrell and Cole, 1990) through a discourse that legitimates the use of testosterone for purposes of transition by 'naturalizing' competitors in sporting contexts.

Transsexual Sporting Bodies

There have been a number of academic journal articles published over the years by researchers studying sex-testing and gender verification policies at the Olympic

[6] A 'gender-affected' sport is one in which "the physical strength, stamina, or physique of average persons of one gender would put them at a disadvantage to average persons of the other gender" (UK Sport, 2005, p. 7). This will be taken up in greater detail in Chapters 2 and 3 in relation to the discourse surrounding unfair advantage.

Games (Cole, 2000; Hood-Williams, 1995; Ritchie, 2003; Wackwitz, 2003), few focused on the plight of transsexual athletes at the level of high-performance until recently (Cavanagh and Sykes, 2004; Sykes, 2006; Teetzel, 2006). Birrell and Cole (1990) were among the first to examine how the public construction of male-to-female tennis player Renee Richards was achieved "through the discursive practices of the print media" in combination with *Second Serve*, her autobiographical book and television movie (p. 2).

When the IOC introduced the Stockholm Consensus in time for the 2004 Olympics in Athens, Greece, a renewed interest in transsexual athletes took effect. Sykes (2006) examined the development of gender policies from sex-testing (1968), Title 1X (1972), and the Gay Games (1990's), to the IOC policy (2004) and found "these gender policies have an uneven history and do not reflect a universal increase in acceptance of gender variance in the world of sport" (p. 3). Cavanagh and Sykes (2006) have taken up the gender trouble (Butler, 1999) transsexual athletes pose to illusion of two, and only two, ways to designate gender by arguing that the IOC policy "fails to guard against discrimination and harassment facing these athletes" (p. 75). Teetzel (2006) explores the controversy surrounding unfair (physiological) advantage in relation to anti-doping issues and concludes that "any advantage a transgendered athlete possesses over his or her competitors differs substantially from the advantages an athlete gains from doping" (p. 227). In addition, researchers have examined the links between gender identity, and fairness in sport (Reeser, 2005) and the perceived challenge transsexual (male-to-female) athletes pose to the IOC's ability to provide a safe environment in which female athletes compete on a fair and level playing field (Ljungqvist, 2004).

The purpose of this project is to build on this existing literature in an effort to reveal the links between the IOC policy, the plight of individual transsexual athletes, and the larger implications for female sport participants and women's sport overall. I have structured my analysis to reflect the dominant themes[7] and key players[8] in order to place them within a much larger discourse regarding testosterone and transsexual participation in sport. This discussion relies almost exclusively on the social status of testosterone as the 'male-sex' hormone to act as part of a disciplinary regime that produces and maintains gendered boundaries between athletes in order to uphold the 'natural' superiority of men in sport. Therefore, I argue, that without the radical deconstruction of testosterone as the 'male-sex' hormone it is impossible to challenge the most basic assumptions about the ability of male-to-female athletes to compete as 'women' in sport.

Testosterone

Fundamental arguments in favour of men's athletic superiority are based upon the 'natural' presence of testosterone in the male body, held to be largely responsible for the greater physical potential for muscular size and strength. Conventional links to strength, competitiveness, aggression, risk taking, self-confidence, dominance, violence, and power support claims that testosterone ('natural' or synthetic) is incompatible to the female sexed body, producing a structured narrative around male physical superiority in which men's natural potential for strength development is understood as real and meaningful (Willis, 1992). This narrative contains ideas about women's physical strength differences that produce material effects related to the limits of female ability, still largely

[7] Dominant themes include eligibility, performance advantage, and gender identity.
[8] By key players, I refer to those athletes who are most representative of the discourse surrounding testosterone and transsexual participation in sport. For the purposes of this thesis, those key players are: Renee Richards (Tennis, USA), Mianne Bagger (Golf, Australia), Michelle Dumaresq (Downhill mountain biking, Canada), and Keelin Godsey (Track and Field, USA).

defined by assumptions regarding 'natural' sporting bodies (Denfeld, 1997). Thus, one of the ways testosterone maintains its cultural status is through the social construction of the 'male-sex' hormone, where its presence in men and absence in women is 'naturalized.'

The social status of testosterone as the 'male-sex' hormone has been challenged by researchers such as Anne Fausto-Sterling (2000), who argues the cultural interpretation of biological facts reveal sexism in science. Balsamo (1996) argues that when certain boundaries are transgressed, other boundaries, particularly gendered boundaries that separates and divides male and female athletes into competitive categories based on sex are more heavily policed. In order to maintain the oppositions between the sexes, I will argue, a gendered boundary regarding testosterone is required that is undermined by the fact that testosterone can sometimes find itself made invisible, although present, in the female body.

There are three primary reasons to analyze testosterone in relation to transsexual sport participation: one, to examine the role that testosterone plays in determining eligibility, by providing the physiological rationale for segregation based on sex; two, to identify the role that testosterone plays in constructing male performance advantage, which attributes the gender gap to biological, rather than social, constructs; and, three, to reveal the role testosterone plays in the producing a female athletic inferiority, which appears to flow 'naturally' from 'real' women in sport and not others. In addition to the media texts analyzed as part of this discourse, a critical analysis of the official documents published by international sports organizations, such as the IOC and UK Sport will reveal that these assumptions are supported both in theory and practice.

Chapter Organization

This first chapter outlines the theoretical framework, methodology, and intended objectives for undertaking this research. It also provides background to the entrance of transsexual athletes into high-performance sport and the assumptions underlying the ability of testosterone to act as the new arbiter of sexual difference in sporting contexts. Each subsequent chapter begins with an examination of the IOC Policy and the role testosterone plays in constructing one of sexual difference, performance advantage, and/or gender identity. This is followed by a fifth chapter, which examines the efforts used to maintain the privileging of testosterone as the 'male-sex' hormone has a number of discursive effects for women in sport, which are discriminatory to female participants.

Chapter 2 entitled *Testosterone and Eligibility,* critiques the rationale for sex segregation by examining the role that testosterone plays in constructing sexual difference in sport. The outcome of this discourse puts into question the logic for segregation based on sex in those sports, which are seemingly unaffected by the gender of the participants.

Chapter 3 entitled *Testosterone and Performance Advantage,* critiques the gendered performance differential between male and female athletes by examining the role that testosterone plays in constructing performance advantage in sport. The outcome of this discourse should force sport governing bodies to consider whether allowing the use of testosterone by female athletes to reduce gender-based sporting inequities is a desirable option.

Chapter 4 entitled *Testosterone and Gender Identity,* critiques the ways in which 'womanhood' is established in sporting contexts by examining the role that testosterone

plays in constructing a female gender identity that appears to flow 'naturally' from 'real' woman and not others. The outcome of this discourse suggests that we must question the investments of those who wish to (re)establish women's sport as a 'women's-only' space by using synthetic hormones to produce a female athletic inferiority that appears 'natural.'

Chapter 5 entitled *Summary and Conclusions*, examine the ways in which efforts to maintain the seemingly 'unnatural' relationship between women and testosterone reveals itself as a lie. The final links made between eligibility, advantage, and identity highlight the ways in which the privileging of testosterone as the 'male-sex' hormone has a number of discursive effects for women in sport. I conclude that testosterone acts as part of a disciplinary regime to produce and maintain gendered boundaries between differently sexed bodies in order to uphold the 'natural' superiority of the male athlete.

In the 13 years since Pat Connolly made the claim that the essence of man was tainting women's athletic competition, testosterone has retained its status as the 'male-sex' hormone within sporting contexts. Origins of men's 'natural' superiority remain obscured through the perceived relationship between testosterone and sport performance, which constructs and legitimizes gender differences by the continuous reinforcement of women's physical inferiority (Birrell and Theberge, 1989). This constant emphasis on female inadequacies in sport (Hayes, 2002) through a discourse constructed around 'lack' is one of the primary ways in which male supremacy is not only established and sustained, but also becomes perceived and experienced as part of the 'natural' order (Connell, 1987). A discursive analysis of testosterone and transsexual sport policy does important cultural work. Through it, an understanding of how relations of power,

knowledge, and discipline shape the human sporting body, along with the idea systems they engage to make sense of this subject is possible. This is the gap that I hope my project will address.

Chapter 2

Testosterone and Eligibility

This chapter critiques the rationale for sex segregation in sport by examining the link between testosterone and eligibility in the IOC Policy. Using this framework, I argue testosterone has become the new arbiter in the construction of 'natural' difference in sport, which has an a priori commitment to segregation based on sex. In this way, testosterone now acts as an extension of previous efforts used to categorize female athletes on the basis of 'lack.' My analysis will focus on the role that testosterone plays in constructing sexual difference in sport by providing the physiological rationale based on sex. The implications of using hormones for the purposes of eligibility force one to consider the logic for segregation based on sex in those sports, which are seemingly unaffected by the gender of the participants.

The purpose of this chapter is to demonstrate how testosterone constructs sexual difference by examining the assumptions that form the basis of the IOC Policy in relation to the larger discourse: one, that modern science does not possess the ability to complete a change from male-to-female; two, anyone exposed to testosterone at puberty (men) will develop physical characteristics that will make them better athletes (than women) without exception; and three, that strict regulation is necessary to protect women from male imposters looking to gain the upper hand in women's sport. The eligibility discourse is composed of three key elements: one, women are essentially different from men and thus sex segregation should remain a form of best practice; two, excluding men from women's competition is crucial to ensure a level playing field for female-born athletes; and, three, feminist arguments for equality of opportunity will lead to a separate, but equal model of

sport participation for female athletes. Each of these assumptions relies on the construction of sexual difference in sport, whereby the presence and absence of testosterone in the male and female body respectively, provides the physiological rationale for segregation based on sex. As such, testosterone now acts as an extension of previous efforts used to categorize (female) athletes on the basis of 'lack'.

Maintaining difference between athletes based on sex has a long history in sport and reflects a number of antiquated social prejudices (Boutlier & San Giovanni, 1983; Brown, 1998). Efforts to determine the sexual identity of female athletes began as a way to prevent men from competing in women's sport. The fear of the 'male imposter' has produced a number of strategies ranging from the physical inspection of the external genitalia, to chromosome and genetic-based testing in order to determine the sexed and/or gendered status of female participants, which has forcefully excluded a number of athletes born female. As such, there have been a number of female athletes who are better known 'failing' their sex tests, or competing as disguised women,[1] than for their athletic performance (Teetzel, 2006). Since scientists were unable to find a single genetic indicator able to prove a category called 'woman' existed beyond a doubt in all cases (Reifer, 2003), laboratory-based sex determination was discontinued in 1999 based on recommendations by the IOC's Athletic Commission. However, although the cessation of gender testing[2] has officially taken place, the need to preserve women's sport for female participants remains high on the IOC's priority list reflected in the IOC's strict regulation

[1] Athletes such as Polish sprinters Stanislawa Walasiewicz (Stella Walsh) and Eva Klobukowska, Czech runner Zdenka Koubkowa, German high jumper Hermann (Dora) Ratjen, Spanish hurdler Maria Patino, French sprinters Clair (Pierre) Bresolles and Lea (Leon) Caula, and Australian skier Erika (Eric) Shineggar.
[2] Not all sport organizations comply with the IOC policy, evident in the recent failure of Indian 800 m runner Shanti Soundarajan who was stripped of her silver medal at the 2006 Asian Games in Doha, Qatar.

of transsexual athletes, who many view, have the potential to compromise the fair and level playing field that exists (presumably) in women's sport.

IOC Policy

In recent years, the IOC has attempted to bring its eligibility rules into line with modern thinking on gender issues, particularly where transsexuals are concerned. In May 2004, the IOC's Medical Commission responded to rulings from the European Court of Human Rights that disallows discrimination on the basis of sex/gender (Hadfield, 2004) and recommended that transsexual athletes be eligible to compete in their preferred sex if they met certain requirements. Up to and including this time, transsexual athletes had been barred from competition. "It's about time," Michelle Dumaresq, the 2004[3] Canadian National Women's Downhill Mountain Bike Champion, says of the Olympic committee's decision to allow transsexual athletes to compete in their self-identified gender (Hui, 2004, p. 1). For the purposes of competition, any athlete that has undergone sex reassignment surgery before puberty is to be regarded in their new post-surgical [sex] gender (girls and women (female); boys and men (male)) (UK Sport, 2005). However, athletes who have undergone sex reassignment after puberty are seen to represent a more complex problem, particularly where male-to-female transsexual athletes are concerned. Thus, eligibility for participation takes place only if the following conditions have been met prior to competition:

a. Surgical anatomical changes have been completed, including gonadectomy and external genitalia

b. Legal recognition of their assigned sex[4] has been conferred by the appropriate official authorities

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[3] Dumaresq has won this title each year since 2004 and is the current Canadian women's champion.
[4] The IOC Policy refers to 'assigned sex', while the UK Guidance refers to 'acquired gender' indicating the difficulty with applying consistent definitions to the use of terms in this discourse.

c. Hormonal therapy appropriate for the assigned sex has been administered in a verifiable manner and for a sufficient length of time, in this case two years after gonadectomy, to minimize gender-related advantages in sport competitions (IOC, 2004).

It is also understood that a confidential case-by-case evaluation will occur. In the event that the sex of a competing athlete is questioned, the medical delegate (or equivalent) of the relevant sporting body shall have the authority to take all appropriate measures for the determination of the sex of the competitor. The IOC's first and second requirements, that require 'proof' of the sexual reassignment process by the appropriate official authorities evokes memories of the forced exclusion of 'other' women who had failed their sex tests at the Olympic games prior to the year 2000 (Teetzel, 2006). According to Patrick Schamasch, director of the IOC Medical Commission, the IOC Policy was designed "more to protect the athlete who has not been sex reassigned than to help the person who is" (in Marech, 2004, p. 1). In this sense, this new policy not only seems like a continuation of previous efforts to protect women's sport from the male imposter, but a way to preserve sport for 'natural' female participants. Myron Genel, an IOC member and Professor at Yale University's school of medicine feels "The IOC was much too slow in eliminating gender verification [but] they certainly have taken the lead in terms of how to deal with transgendered athletes" (Hui, 2004, p. 2). Canadian IOC member and former Olympic athlete Charmaine Crooks seems to convey a similar version of the policy's purpose in the following statement.

> It [the IOC Policy] clearly shows that we [the IOC] will always address issues of human rights. That's something that we find very important. It also shows that when there is an issue, we will study it and if it fits with our fundamental values and philosophies, then we will act on it and act quickly, but also act in the best interest of all athletes (Hui, 2004, p. 1).

Although Teetzel (2006) argues, "Crooks' remarks show that the IOC will not tolerate the deliberate exclusion of a marginalized group of people without a convincing reason to do so" (p. 232), I believe her statement actually reflects an interest in attending to human rights of those athletes that "fit" with their "fundamental values and philosophies." Given what is "in the best interest of all athletes" is often not compatible with an individual athlete's human rights, the notion that the IOC Policy represents a progressive politics where transsexual athletes are concerned remains to be seen. Further, granting absolute authority to medical personnel to take all 'appropriate measures' to determine the gender of the competitor seems highly inappropriate when previous efforts to categorize female athletes on the basis of sexual difference have proven to fail. Whether 'appropriate' has any regards for basic human rights is also open to interpretation. However, it is the IOC's third requirement, concerning hormonal therapy that establishes a link between the absence of testosterone in women and the cultural myth of female athletic inferiority, previously tied to a 'lack' of a penis and/or Y-chromosome, that directs my argument here.

Male-to-female athletes are seen to present a complex problem due to the uncertainty about how far reaching the impact of the previous and residual effects of testosterone are or whether they are reversible during the 'feminization' process. Being *under the influence* of testosterone in a former male sex is considered, in theory, to be important even after a reassignment to a female sex (IOC, 2004) because of its apparent link to a muscular strength that is viewed as distinctly male. As such, although the transsexual literature rarely intersects with the sport literature (Teetzel, 2006), the role of testosterone as the (final) arbiter of sexual difference is a link they both share. If the

suppression of testosterone combined with the supplementation of estrogen is what "constitutes the cornerstone of feminization for male-to-female transsexuals" (Reecer, 2005, p. 696) then hormone therapy should have the ability to act the critical intervention in effecting the switch from one sex to the other in sporting contexts.

Essential Difference

The belief that women and men are essentially different provides the physiological rationale for sex segregation in sporting contexts, but just how they are essentially different is up for debate. Former US Olympic pentathlete, Pat Connolly, believes that allowing male-to-female athletes to compete in women's sport is inherently unfair: "Genetic males should not be allowed in competitions for women, period!"[5] In an article called "Transgender quandary: Debate rages on the fairness of new inclusion rule," Connolly says:

> The [IOC Policy] is the biggest insult to women and everything we've gone through. Gradually over the years, (the Olympics) started adding events for women. Why? To give women an opportunity to compete...because there's an essential difference between men and women. Any dummy on the street knows the difference (in Marech, 2004, p. 2).

However, while *any dummy on the street*[6] may know the essential difference between men and women, the same cannot be said about the IOC medical commission who have discovered that, as research into the human body has progressed, the 'essential difference' between the sexes has become increasingly difficult to ascertain. Although the IOC may not know what the difference is, or how to properly test for it, they seem to believe that there is a difference between the sexes that matters. Thus, in order to

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[5] Statement taken from an interview at http://www.athleticslinks.com/art/connolly.php

[6] It seems logical that the same 'dummy on the street' would likely be opposed to women's sport participation at all. Thus, I would caution Pat about where she draws support for her argument.

safeguard against the possibility that some transsexual athletes might have an unfair advantage based upon physical ability (Carnell, 2004), the UK Guidance (2005) makes clear that provisions can be made for a variety of circumstances.

> It does not require persons responsible for regulating participation of competitors in sporting events to permit transsexual people to compete in their acquired gender in all circumstances. In certain circumstances they may be restricted or prohibited from doing so to ensure fair competition in the case of a 'gender-affected sport', which means one where the physical strength, stamina or physique of average persons of one gender would put them at a disadvantage to average persons of the other gender [or] where it is necessary to secure the safety of competitors (including the safety of transsexual competitors) (p. 7).

Given the first two required conditions of participation (surgical changes and legal recognition) ensure transsexual athletes are the same (or similar) to other athletes, it can only be the IOC's third requirement concerning hormone therapy that this stipulation has been put into effect to cover. According to this section, any sport in which the average woman may be at a disadvantage to the average man would be able to justify excluding male-to-female athletes from 'women-only' events. Thus, if a male-to-female athlete wished to compete in a women's sporting event, their eligibility would be determined in relation to how average women measure up to average men, not whether they are stronger, taller or heavier than the actual women they would be competing against. This section presumes that any male-to-female athlete would, by nature of their birth sex, have an advantage over any elite female athlete, by nature of her birth sex. This ignores the already existing wide range of size, height, skill, strength, ability, speed and other components of athletic ability among women (Griffin, 2005) in general and female athletes, in particular.

Using the term 'average' in this section, not only justifies discrimination, but implies that the presence of testosterone in the male athletic body produces men as better athletes than women without exception. Without some kind of physical testing to support such claims, any presumed advantage between otherwise similar competitors is highly implausible. Michelle Dumaresq is one competitor open to being tested. She states:

> I am a World Cup mountain biker. If you want to test me against someone with the same body type – Fionna Griffiths, Tracy Moseley, Lisa Shur, or any of those girls that have a similar body type – absolutely, I'd be there in a second. But I refuse to be tested against the average woman, because I am not average. But they didn't test me, and they never will test me because they are afraid of what the results will be...the Olympic committee is so scared to know that trans-people compete legitimately against biological women (in Hargrove, 2004a, p. 3-4).

It would be difficult to prove that the best athletes were the ones with the greatest physical strength without having some kind of standard testing prior to competition. If the strength difference between the sexes held true, that is, if all men were stronger than all women, the only kind of sex-testing that would need to take place at the Olympic level would consist of a bench press and possibly a squat, in which those athletes that comprised the lower end of the spectrum would be identified as female and all those at the top, male. If men are naturally superior to women because they possess higher levels of testosterone, then any woman who has to date outperformed a man in the competitive arena must have done so by unnatural means, implying these victories were only made possible through the use of drugs and/or other genetic abnormalities. However, not everyone shares the view that modern science has the ability to complete a change from a man to a woman and believe that transsexual athletes retain a level of physical strength 'natural' to their former sex. Cassandra Boon, a nationally ranked women's downhill

mountain biking competitor, reflects this belief in the documentary *100% Woman* when she says:

> Unless they've gutted you and taken out everything that's inside of you and put in female parts. And then changed your body to a female as well surgically, and even then, how can people turn a man into a woman? (Wilson and Duthrie, 2004)

Sylvie Allen (2004), another competitor on the professional circuit, shares a similar view:

> You can't change the fact of your chromosomes, you just can't change that.

Missy Giove, an American competitor, feels differently. Her attitude is:

> Bring it on, let's see what she's got...She's a woman now and that's that and she doesn't have testosterone.

These statements, made in *100% Woman*, a documentary film about Michelle Dumaresq, identify the same biological markers utilized by the IOC at one time or another for gender verification purposes: external genitalia (physical inspection), chromosomal makeup (genetic-based testing), and the presence or absence of the 'male' hormone testosterone (transsexual policy). Each relates a different indicator of 'woman' to support their argument that Dumaresq should (not) be eligible to compete in her self-identified gender. Both Boon and Allen express views of the body that are essentialist and fixed, thus cannot be changed. However, Missy Giove indicates that formerly male athletes can, through a 'lack' of testosterone, compete against other women in sport, although she does essentialize 'woman' as the quality of not having testosterone. Giove also asserts that Dumaresq's status as male or female is irrelevant.

> Yeah, I think she should be allowed to race and I'm not afraid to race her and, you know, why are we so threatened by men as females? I'm not, you know, why should we be? And she's not a man, she's a woman, you know and people need to understand that (Wilson and Duthrie, 2004).

By insisting that Dumaresq should be allowed to race, Giove dismisses not only the notion that male-to-female athletes are threatening to women in sport, but recognizes that this fear is irrational. The idea that the presence of athletes, like Dumaresq, are problematic to female competitors rests on the belief that men are better athletes than women without exception, or what I refer to as the 'any' man (can) syndrome. This assumes that anyone exposed to testosterone at puberty will develop the physical characteristics that contribute to athletic success in all sports and that 'any' man who wishes to compete in 'any' sport against women would be successful.

Gender affected sport

To stipulate that transsexual athletes may be prohibited from competition in 'gender-affected' sports indicates that there are other sports, which are 'gender-unaffected.' In other words, the presence of those sports in which physical strength, stamina or physique are unrelated to the hormonal changes transsexuals would experience and thus not require the exclusion of individual athletes at elite levels is included by its absence. In response to questions like "what's to stop *any guy* (maybe struggling to make it on the men's tour) having a 'sex change' and then playing on the women's tour," Dumaresq replies "if a pro athlete wants to go through what I've gone through, and then start racing again to try and win, let them try...SRS is irreversible" (Hui, 2004, p. 2).

Mianne Bagger became a historical groundbreaker as the first transsexual woman to ever play in a professional golf tournament in 2004 at the Women's Australian Open. In an ABC Special on Bagger, called *Different Strokes*, Dr. Renée Richards, the woman who was considered a pioneer for transgendered athletes, was asked to comment on

whether transsexual (male-to-female) athletes should be allowed to compete in women's sport. Although Richards opposes claims that portray male-to-female athletes as desperate individuals willing to chop off their genitals in pursuit of athletic success (Sez, 2004), she supports the idea that men who compete against women in sport create a situation that is unfair. She states:

> I will tell you that if Tiger Woods were a true transsexual, had the operation he would still be too much power for the women on the LPGA (Schadler, 2005, p. 3).

Mianne Bagger admitted she was unsure about what to think of Richards' comments.

> "Suggesting that someone like Tiger Woods could go through treatment to then play on the women's tour is unbelievable to me ...and quite inconceivable...if Tiger Woods was a *real* transsexual", well that's like saying, "If Tiger Woods wasn't really Tiger Woods" (Schadler, 2005, p. 3).

There is an interesting contrast between the statements made by Richards and Bagger. A 'true transsexual' to Richards would retain their 'power' over female competitors, but a 'real transsexual' to Bagger would no longer be the person he once was. In this case, he would lose his 'power' over women on the LPGA tour. However, what neither Richards, nor Bagger, admitted was that Tiger Woods is too much power for the majority of men on the PGA. Clearly, the belief that transsexual athletes benefit from the sexual reassignment supports these claims. These statements give the impression that the performances of top male athletes represent the norm, rather than the exception, in men's sport. Many top female athletes, such as Marion Jones or Serena Williams also dominate the majority of the women's field. What these arguments fail to include is how exceptional female athletes would be matched against average male athletes in direct

competition. By making extreme examples stand-in for the average male, discussions about the ability of women to compete on par with their male counterparts gets left out.

Inclusion/Exclusion

Around the same time Mianne Bagger first made her entrance into the world of professional women's golf at the Women's Australian Open in 2004, the Ladies European Golf Tour eliminated the "female at birth" rule to put its membership policy in line with International Olympic Committee regulations to include male-to-female athletes. During this time, however, Bagger was ineligible to play in the US, because the Ladies Professional Golf Association (LPGA) retains this female-at-birth rule, which *naturally* disqualifies transsexual athletes (Schadler, 2005). As a result, she has spent a lot of time writing to various golf tours in order to have the "female at birth" clause removed from her entry forms in order to compete (Benson, 2005, p. 1). Ty Votaw, the tour's outgoing commissioner, said the "female at birth rule was born from the notion that transsexuals...would create an unfair effect on the competition, which is one of the reasons why we don't allow men to play on the LPGA tour" (Schadler, 2005, p. 4).[7] Again, while the differences between men and women have not been identified, the effect that this difference has matters in significant ways.

However, not everyone believes that the requirement to be a 'natural-born' woman is at odds with male-to-female transsexual participation in sport. Beth Daniel, a veteran LPGA pro said "I think the tour in general, if the research showed that there was reason to change the rule, would be more than willing to change the rule" (Schadler,

[7] The female-at-birth rule came about when Charlotte Wood, a male-to-female athlete, placed third in the 1987 U.S. Senior Women's Amateur, and reached the semifinals of the U.S. Women's Mid-Amateur. The USGA put the "female at birth" clause in its entry forms in 1989, while the LPGA Tour added the restriction in 1991.

2005, p. 2). According to Women's Golf Australia (WGA), the amateur governing body that organizes the Australian Women's Open, such research does exist. In fact, the Australians had changed their rules back in 1999, after Bagger won her first major tournament in Australia. They found that women who had been through sex reassignment surgery had no unfair advantage over other 'natural-born' women, which prompted the change.[8] Although, similar to whether 'appropriate measures' has any regards for basic human rights in the ability of the IOC to confirm the sexual identity of female participants, the suggestion that the LPGA tour should wait for available research to change a rule that is both arbitrary and discriminatory[9] seems to be an excuse to justify exclusion. In the same *ABC Primetime Special*, Dr. Renée Richards, said, "The LPGA may be smart in holding to their ideas about this" (Schadler, 2005, p. 4). Although she fought for and won the right to be allowed to compete on the women's tennis circuit in the 1970s, she is ambivalent about her actions today.

> At that time, I felt that it was my right to be allowed to play as a woman. Maybe it was too much for me to ask. Maybe I shouldn't have been allowed the same rights and privileges that a natural-born woman had (Schadler, 2005, p. 4).

Richards was also asked to comment on Dumaresq's story by the *National Post* and said Dumaresq was fighting a losing battle and that even if she does win, she'll lose. Richards transitioned in 1975 at the age of 40, twenty years before Dumaresq completed her sexual reassignment in 1996 at the age of 25. Although it may seem odd that Richards would oppose other male-to-female athletes competing, as she did, in their self-identified gender, her views reflect the 'battle of the sexes' discourse that came to dominate her

[8] The notion of 'unfair' advantage will be discussed in detail in Chapter 3. This rule-change has only been mentioned here to show how male-to-female athletes are excluded on this basis.
[9] The LPGA is reconsidering their rule at present, but currently, no changes have been made to the existing policy.

generation of female athletes. Clearly, Richards believes excluding male-to-female athletes from competition against 'natural-born' women is justified. However, there are similarities in the way Bagger and Dumaresq talk about issues of inclusion and exclusion in their sports. When talking about her 'right' to inclusion among other female competitors, Bagger speaks of opportunity: "I'd like to have the same opportunity as any other woman out there basically. I mean in a way I'm a woman being barred from competing with other women. At the end of the day I just want to play golf" (Hadfield, 2004, p. 2). However, when defending a 'right' not to be excluded from women's competition, she discusses her performance:

> My game needs only to be compared to that of the other girls to see there's no difference and more to the point, compare it with guys of the same standard…there just *is* no comparison! (Bagger, 2007)

On the one hand, Bagger argues for inclusion based on "equality of opportunity" *as a woman* and on the other because her inferior performance standards are comparable in significant ways *to other girls*.[10] The use of the term 'woman' when linked to rights and opportunity and 'girls' when talking about performance advantage is reflective of the discourse surrounding female athletes in general. In this sense, her performance then becomes a marker of eligibility. She is, in fact, just *playing like a girl*. In order for Bagger to be included in women's events, she must convince others that she has achieved the appropriate 'lack' as a required condition of participation. Should Bagger's game remain more similar to male performance standards; there would be additional opposition to her competing in women's golf. Dumaresq reflects similar views. She believes she is eligible as a woman.

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[10] Bagger's use of 'girls' is significant because of the sheer number of times she uses the term to refer to herself and other female competitors (see Anyone for tee, 2004; Hadfield, 2004; Schadler, 2005).

> I want to race a bicycle, that's what it comes down to. I fit on the gender spectrum as a woman. I believe I have the right to be there and I believe it's fair (Wilson and Duthrie, 2004).

But her performance (as a girl) confirms it. After she beat Claire Buchar at the 2004 Canadian National Championships in Whistler, BC she stated:

> I expect Claire to be disappointed, but the rest of the girls are all supportive and happy and, you know, everybody has been very pleasant (Wilson and Duthrie, 2004).

However, once Dumaresq started winning races, her performance (as a girl) came into conflict with her rights (as a woman). In other words, as a woman, she has the right to a female performance, which, by contrast, is not male. In an appeal to the UCI dated June 27, 2002, Sylvie Allen, a fellow competitor, wrote:

> Amongst those of use who have cycled with her] we are very impressed by her strength, endurance, speed, and skill -- all quite good as a man, but too suspiciously impressive as a woman (Billman, 2004, p. 3).

When Allen describes the way Dumaresq cycles as "too suspiciously impressive as a woman," she ascribes gender-specific characteristics to a particular kind of athletic performance. In this way, Dumaresq remains suspect because her cycling abilities do not appear to match her gender performance, which further positions Dumaresq as a male imposter. Thus, eligibility requirements include women who have achieved the appropriate 'lack' (of testosterone), but seek to exclude women for whom this 'lack' does not match up to performance. In this way, testosterone acts as a marker of female performance or in other words, Bagger and Dumaresq must play 'like girls' or not play at all. When these athletes 'switch gears,' or place a greater value on a successful sporting performance, than a feminine gender performance, a number of problems arise, as we will see in further controversy surrounding Dumaresq.

Switching Gears

Michelle Dumaresq has been at the center of controversy in her sport ever since she competed in and won her first race with a time in the beginner category that would have beat all the professional female riders by 2 seconds. Although she had legally changed her gender status to female 6 years prior, cycling's governing bodies suspended her license after some of her fellow races filed complaints against her:

> You see it's OK in our society to be differently gendered (at least here in Canada) but when someone like me takes up competitive sport a few eyebrows get raised. I have found as a trans person it's acceptable to compete but don't you dare win (Dumaresq, 2005, p. 2).

The decision on Dumaresq's status eventually came down to her birth certificate, which she had changed to identify herself as female. The Canadian Cycling Association decided that since Dumaresq is legally recognized as female, she should have the right to compete in women's sports (Hui, 2004) and granted her a full license to compete as a professional mountain biker in April 2002. The documentary about her experiences, *100% Woman*, details how she went on to win the Canada Cup series and became the first known transsexual athlete to earn a spot on a national team. She placed 3rd in her first race as a pro, but won the week after by a difference of 10 seconds. That's when, Michelle says, "the shit hit the fan" (Dumaresq, 2005, p. 3). Some other racers, led by top Canadian downhillers Sylvie Allen and Cassandra Boon, with whom Dumaresq had frequently ridden over the preceding two years, circulated a petition to overturn her win, requesting that the event results be rendered null and void.

The race commissioner rejected the request. The reason was simple. "She is legally a woman," says the Canadian Cycling Association's Pierre Hutsebaut in *100% Woman*, echoing the same decision that granted transsexual Renée Richards the right to

play tennis in the women's division at the U.S. Open. It is logical to speculate that Dumaresq racing would not have been an issue had she been unsuccessful in competition. "Until then, no one said boo," she said, adding some of the racing women she used to call friends will no longer speak to her. "I guess now [they] feel a bit threatened" (in Bricker, 2002, A03). Her view was confirmed, when at one point during the protest, Cassandra Boon stated that

> We were going to do something more today, but we're going to wait and get some advice from maybe some of the like, top, top, pro women in the world, because clearly Michelle is good enough to be a threat to them too. Like, she's pretty fast (Wilson and Duthrie, 2004).

Clearly, Dumaresq poses a threat to other racers because she beats them and, as Claire Buchar reveals in response to Dumaresq's win, she is taking the top spots away from the rightful owners:

> I'm not surprised Michelle won because she's very fast and very strong, so but in my mind I think I won, and a lot of people had said that to me...you won, you're the first female...I could have been National Champ today I could have been on the top of the podium and I could have had my plane ticket paid for that I worked so hard for (Wilson and Duthrie, 2004).

Buchar's comments reveal the fact that she believes that Dumaresq does not have to work hard for her results in the same way that she has had to, because she is not really female. In late June some of Dumaresq's teammates took their protest to the World Cup at Mount St. Anne, Que, but their complaints fell flat (Reifer, 2003). Allen stated that those who signed their petition believed in their cause "being, just, you know, women racing...they don't feel it was fair that she competed in the elite women's category" (Wilson and Duthrie, 2004).

Category

The idea of a transgender category was brought up in the six-page letter of protest circulated by Sylvie Allen and Cassandra Boon. These racers argued that Dumaresq had an unfair advantage over "natural women" and should be either banned from the professional racing circuit or relegated to a new, "transgender" category. The letter contained the following points:

- Transsexuals should not compete in a category reserved for natural women.
- Transsexual women are unique in terms in athleticism; they should be allowed to compete in a new category called 'transgender'.

The idea that Dumaresq should be racing in a separate category called 'transgender' is important here, particularly because the term 'transsexual' is also present. One can assume that using 'transgender' would also allow the inclusion of female-to-male athletes, along with male-to-female athletes like Dumaresq, although there is no mention of this. It would seem that lumping all transsexual individuals into one category would lie in contrast to their argument that a) there is an essential difference between men and women that cannot be altered (if Dumaresq is still a man, then she would still have an advantage in the 'transgender' category over 'transsexual' female-to-male athletes); and b) that men retain a performance advantage over women in all circumstances (that if Dumaresq didn't retain this advantage in the 'transgender' category, then she would also not retain a similar advantage in the 'female' category). If this is the case, then there should be two categories for transsexual athletes: one for transsexual men and the other for transsexual women. Dumaresq best expresses what is missing in the proposed 'transgender' category when she stated:

> The reality is that you're a transgendered person during transition. After transition, you're either a woman or a man. You're not a transgendered person indefinitely. So there can be no transgendered category (Wilson and Duthrie, 2004).[11]

This statement is representative of some individuals who argue "they are not trans, but rather that they are simply men or women who are correcting a biological mistake" (Scott-Dixon, 2006, p. 13), which is reflected in another statement by Dumaresq below:

> For the most part, I don't go walking around yelling, "I'm a trans person! I'm a trans person" It's not part of my life. Yeah, I had some surgery to correct a birth defect, but yeah, whatever, I'm female. I just moved on. I get constantly reminded that I'm trans...Yeah, technically, on some level I'm trans. But in reality, the word 'trans' itself doesn't really apply to me. Because trans means moving from one to another, well I moved from one to another, so now what do you call me? How 'bout woman (in Hargrove, 2004a, p. 1)?

Uncertainty regarding which sexed category transgendered athletes should rightly compete in and who should make that decision abounds. Kelly Sherbinin, a downhill mountain biker who has raced with Dumaresq, believes that although there are places where it may seem unfair, "we're placed in a society where all we have is two genders and you're either one or the other and right now she is a woman, she is legally labeled a woman and there is no other place for her" (Wilson & Duthrie, 2004). It seems that whatever category Michelle was assigned to compete in would be inherently unfair to one or more athletes, including herself. At one point during the protest, Allen stated Dumaresq was "going to be on her own, we might even decide to protest a race. And

[11] It should be noted here that not all transgendered individuals represent themselves in this way. For example, Leslie Feinberg (1994) and Kate Bornstein (1994) have produced texts that challenge binary gender categories by refusing to identify as either male or female. They also call into question the traditional transsexual paradigm of feeling "trapped in the wrong body," transitioning to one's "right" gender, and no longer seeing oneself as transsexual (Beemyn, 2006).

she'll be the only one racing." The idea that adding another category would make competition fair is unfounded, for it just serves as another way to include some, while excluding others. Although other racers would favour the creation of one transgender category, cycling's governing body does not allow competitors to blur the distinction between male and female.

> The UCI's own rules state that according to them, the men's category is the men's category; the women's category is the women's category. The women couldn't race with the men, even if they wanted to. Missy Giove is not allowed to race with the boys, no matter how much she wants to. Her birth certificate says she's a woman. She must race with women. My birth certificate says that too (Hargrove, 2004a, p. 4)!

When asked in an interview for *NSMB magazine* about what she saw in the future for transgendered athletes, Dumaresq replied she would

> Fight tooth and nail to stop anyone from starting a trans-gendered category. Our society doesn't recognize a third gender, so why should we have a third gender in mountain biking? We have male/female on our driver's license; we don't have a T for trans. You need to either make a decision - either I'm male or female...But I'll do everything to protect the fact that we have a binary gender system right now. I don't necessarily agree with it. I'm not arguing for or against the binary gender system, I'm arguing this is what we have currently. Our society has picked the two-gendered system and I'm going to subscribe to that, as long as everyone else is (in Hargrove, 2004b, p. 2-3).

Dumaresq is correct in saying that sport governing organizations, such as the IOC, force athletes to be(come) women through the use of, among other things, (female at) birth certificates to confirm eligibility. She is also justified in pointing out that we are all subject to the same sex and gender system that regulates who we are, how we identify, and which 'male' or 'female' box we check on our applications for one thing or another. Dumaresq's comments also reveal that she is playing the game by the same rules that all other competitors are forced to comply with. Therefore, the idea that we should change

the rules inside sport that are inconsistent with those outside of sport is discriminatory to athletes like her. However, excluding women such as Missy Giove, who "couldn't race with the men, even if [she] wanted to" (Wilson and Duthrie, 2004), is also unfair.

For those who fail to meet the 'female at birth' requirement, legal recognition of their assigned sex can only be achieved by completing surgical anatomical changes and hormonal therapy for the purposes[12] of sport participation. Thus, it is misleading to use the term 'transgender' when making reference to these policies because they exclude those athletes who do not satisfy the IOC's conditions of participation, which includes SRS. The IOC claims that this policy establishes the conditions under which all transsexual athletes are able to participate. However, the IOC's third requirement that hormonal therapy appropriate for the assigned sex be administered for two years to minimize gender-related advantages (IOC, 2004) linked to testosterone is specific to male-to-female athletes. Whether this exclusion from the IOC policy is based on the assumption that female athletes would be unable to compete *fairly* against male athletes is unclear. To my knowledge, there are no female-to male athletes that have undergone SRS and hormonal therapy to qualify for men's competition at the elite level.[13] However, there is one athlete at a Division III college in the US, named Keelin Godsey, who competes in the women's category, while self-identifying as a transgendered male. Keelin has been included in this discourse because he plans to put off sexual reassignment surgery and hormone therapy in order to remain qualified for women's

[12] I do not mean to imply that the sole purpose of the sexual reassignment process for transsexual athletes is to compete in sport, but that athletes must transition to be eligible to compete at the elite level. Thus, trans athletes, who do not undergo SRS are excluded from this policy.

[13] I am aware that other female-to-male athletes exist, but either they do not compete at the Olympic level and/or choose not to be identified in the public realm. Alyn Libman is a 19-year old figure skater from UC Berkeley who has received permission to compete against other men, but believes that reaching the elite level is out of the question (Marech, 2004).

competition at the 2008 Olympics in Beijing, China, for reasons which I believe support the perception that female-to-male athletes would have better success as female in women's sport, than as male in men's sport.

Keelin Godsey

Keelin Godsey is a 12-time All-American athlete from Bates College, a Division III school in Lewiston, Maine. As Kelly, he developed into one of the greatest female athletes in Bates school history in the hammer throw, shot put, discuss, and the 20-pound weight (Grossfeld, 2006). If Godsey were to compete in his self-identified gender as male, he would be required to wait two years after surgery, however Godsey is delaying hormone therapy and possible sexual reassignment surgery until after the 2008 Olympics, in order to remain eligible to compete in the female division.

Before the fall term began in Keelin's senior year, Godsey had met privately with Bates athletic director Suzanne Coffey, who spent the summer in consultation with the NCAA and the Center for Drug Free Sport to discuss any potential legal and competitive issues regarding his eligibility. NCAA regulations state that an athlete is categorized according to his or her sex by state law (Oakes, 2006), which considers Godsey, a pre-operative transsexual, physiologically female, because he had not (yet) begun a course of hormone therapy. In other words, since he has not "changed his physiology to male, he will meet the criteria required to compete in women's sports" (Grossfeld, 2006, p. 1). Thus, as long as Godsey abstains from the use of 'male-hormones,' that enhance performance in women's sport, mandatory drug tests sanctioned by the NCAA or the IOC should turn up clean (Oakes, 2006, p. 2). It is evident that testosterone acts as the primary determinant in determining which category Godsey is eligible to compete in. If Godsey

were a male-to-female athlete, he would be able to begin a course of hormone therapy (estrogen and progesterone) to feminize his body while remaining qualified in men's sport. However, because hormone therapy for women constitutes the use of testosterone, as a performance-enhancement, he must decide which performance most matters to him: sport or gender. In this way, the IOC policy favors male athletes regardless of the gender they prefer to compete in.

Godsey's situation is also an example of how the eligibility requirements of the IOC policy have been designed to specifically regulate the participation of male-to-female athletes. Female-to-male athletes are excluded from this discourse in three ways. One, there is no reason why surgical anatomical changes, including gonadectomy and external genitalia, need to be completed. Two, being legally recognized as 'male' is irrelevant when there has been no history of sex-testing and/or gender verification procedures aimed at confirming the 'masculinity' of male participants to protect against the fear of the female imposter. Three, forcing female-to-male athletes to wait two years after gonadectomy, to minimize gender-related advantages in sport competitions (IOC, 2004) to compete with men is arbitrary, if there are no gender-related advantages to be gained from the transition from female-to-male. Any advantage gained during hormonal therapy, would in theory help to level the playing field and increase as time progressed. In other words, the longer the athlete is on a course of testosterone, the greater the effect it would have on his sport performance.

Although Godsey competing in the women's category as a self-identified transgendered male does challenge the accepted boundaries of gender identity in sport, his perception of what constitutes fair competition does not. Dumaresq, Bagger, and

Richards each link the concept of fairness to whether a perceived advantage exists for male-to-female athletes in relation to the effects of testosterone. Given Dumaresq and Bagger believe an advantage does not exist, they argue for equality of opportunity on that basis, in contrast to Richards who feels that, in hindsight, she "shouldn't have been allowed the same rights and privileges," that other women had. However, each of them fails to argue that discrimination on the basis of sex is inherently unfair. These views are consistent with the dominant liberal feminist discourse in sport studies whose central focus on equality of opportunity (Hargreaves, 1990) falls short of challenging the practice of sex discrimination that is often illegal in many other institutions outside of sport.

Liberal (sport) Feminism

The liberal feminist position is the dominant pressure in sports feminism, whose insistence on the 'natural' distinction between male and female underlies their claims for equality of opportunity with men in sport (Hargreaves, 1990). Although liberal feminism has exposed myths about the female body that have been crucial in rejecting biological explanations of women's subordination in sport, they have failed to confront the fundamental assumptions about sexual difference which keeps in place the hierarchical structures within which both sexes operate (Miles and Middleton, 1989). In fact, they have used these 'natural' differences to support an equality of opportunity model to argue for a separate, but equal model of sports participation for girls and women. Feminist scholars have argued (Hall, 1996; Hargreaves, 1990; Messner, 2002) that feminist sport organizations such as the Women's Sport Foundation in both the United States (WSF US) and the United Kingdom (WSF UK); the Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS); and the Women and Sport

program of the Australian Sports Commission (ASC), operate within the parameters of primarily liberal feminist democratic ideology. They advocate for the adoption of public policy to improve and promote opportunities for girls and women to increase sports participation and eliminate barriers in order to gain "easier access and better facilities, improved funding and rewards, equal rights with men under the law, top quality coaching on a par with men, and an equivalent voice with men in decision-making" (Hargreaves, 1990, p. 287).

There are two crucial links between feminist sport organizations who advocate on behalf of women and girls in sport and sport governing organizations that desire to maintain women's sport for female participants. They both rely on the presence and absence of testosterone, in the male and female athletic body respectively, as the arbiter in the construction of 'natural' difference to support sex segregation in sporting contexts. They also reveal an a priori commitment to segregation based on sex by unnecessarily enforcing segregation in situations (before puberty and in gender-unaffected sports) where performance outcomes are unrelated to testosterone. Given WSF in the US and CAAWS specifically outline their position on sex segregation, their statements will remain the focus of this chapter. In contrast, the WSF in the UK and the ASC in Australia provide a more thorough discussion on issues related to advantage where male-to-female athletes are concerned, which will be the focus of Chapter 3.

The Foundation Position

Despite acknowledging that prior to puberty, there are no gender-based physiological reasons to separate males and females in direct competition (WSF, 2002); segregation based on sex is encouraged as a form of best practice among feminist sport

organizations. This is evident in position statements from the WSF US concerning whether girls should be able to play on boys' teams before puberty. Given that performance outcomes would not be directly related to testosterone in this type of situation, segregating boys from girls (and vice versa) indicates that there must be some other reason that segregation based on sex remains the norm.

According to the feminist sport organizations, a girl playing on boy's team is justified when girls possess the required skills and abilities to compete under conditions in which girls are underrepresented and/or have fewer opportunities to compete in the sports program and/or there is an inequitable division of resources between the sexes. However, once equality of opportunity and equitable sport standards are in place, the most desirable option "both for the girls themselves and for the development of the larger female sporting community" (CAAWS, n.d.) is for girls and boys to compete on separate teams. These statements reveal two things: one, there is a different standard that girls must meet that boys do not in order to play on a boys team (there are some boys that do not possess the required abilities and skills to compete, but are allowed to do so anyway); and, two, there are *desirable* reasons for sex-based discrimination that justify segregation when no other physiological reasons exist to do so. Further, for those females who wish to participate on a male team in the same sport for the purpose of gaining access to better competition to further her level of skill, differences between girls and boys' teams are seemingly justified because "they are not intentionally imposed differences and thus not discriminatory [as they] arise from the abilities of team members themselves" (WSF, 2002).

The use of differences that are *not intentionally imposed* indicates that in some instances, social discrimination between girls and boys is justified in situations that reflect the 'natural' differences between the sexes. As such, access to better competition and equality of opportunity can only take place under conditions where the 'natural' differences between the sexes don't prevent this from happening. In regards to co-ed sport participation, the WSF advocates competition groupings organized around skill and experience, rather than gender. However, once boys reach puberty, the consensus is that "it is unfair for boys to compete against girls on equal terms...due to the male hormone androgen" (WSF, 2002, p. 2).

> Boys develop more muscle mass per unit volume of body mass than do girls. Thus, even if you have a boy and girl of the same height and weight, the boy will have more fat free mass (a greater percentage of his body will be muscle) than the girl...he will be stronger, able to run faster, throw farther, etc. This is why after the age of 11 or 12, boys and girls compete (and should compete) on separate same-sex teams (WSF, 2002, p. 2).

However, it is not clear why boys and girls should be (and are) segregated at puberty, while boys in various stages of pubertal development remain in direct competition with other boys. In a 1977 case, a U.S. District Court judge stated:

> The failure to establish any physical criteria to protect small or weak males from the injurious effects of competition with larger or stronger males destroys the credibility of the reasoning urged in sport of the sex classification...This notion that young women are so inherently weak, delicate or physically inadequate that the state must protect them from the folly of participation in vigorous athletics is a cultural anachronism unrelated to reality (Hoover v. Meiklejohn, 1977).

Therefore, segregation based on sex is discriminatory both in theory and in practice. Further, the fact that the influence of testosterone at puberty is used to separate boys from girls, but not from other boys, when indeed there seems to be a physiological reason (or the same physiological reason) to do so exist, is contradictory. Clearly,

testosterone provides the physiological rationale for segregating some athletes, but not others, and thus acts arbitrarily to create and "maintain the fiction of separate, categorically different, and unequal" social structures in sport that appear 'natural' (Messner, 2002, p. 2). This produces male athletes as the inevitable champions of sport, but also presumes the outcome of direct competition between the sexes prior to any evidence that would support it (Hood-Williams, 1995).

Female athletes

These arguments used to justify segregating women (and girls) from direct competition with men (and boys) also act as the foundation for similar arguments that oppose the entrance of male-to-female athletes into women's sport. Despite opposition to the use of gender verification procedures on female athletes, women's sport organizations advocate testing "to prevent men from masquerading as females at women-only competitions" (WSF, 2000, p 1). The threat that men posing as women present is linked directly to the influence of testosterone, the 'male-sex' hormone. Therefore in order to diffuse this threat where male-to-female athletes are concerned the WSF supports "the two-year hormone requirement that is intended to remove any size and strength advantage" that these athletes may have.

In "Chalk Talk: Inclusion of Transgender Athletes on Sports Teams," Griffin (2005) states that athletes must be allowed to participate in the preferred gender as long as they are not taking hormones or undergoing sex assignment surgery. "For an athlete whose birth sex is male...and is not taking hormones...may have an unfair competitive advantage if competing against women who were female at birth [which] may not be the case for athletes transitioning from female to male" (p. 5). While the WSF also

recognizes the need to restrict or prohibit transsexual athletes from participating in order to ensure fair competition and safety of other competitors, they reiterate the *fear of the male imposter* by acknowledging that advantage only applies in one direction: from male to female. Rather than focusing their attention on male advantage, feminist sport organizations should take note of the stipulation in the IOC policy that allows sport governing bodies to prohibit transsexual athletes from competition in 'gender-affected' sports, which indicates that there are other sports, which are 'gender-unaffected' (outcome unrelated to the effects of testosterone in the male-sexed body). Given that all sports in the Olympic program remain segregated according to sex, this puts into question issues that serve as the foundation of sport itself, namely the rationale for organizing sport along lines of sexual difference in those sports in which testosterone makes no difference. This indicates that situations already exist in which athletes are segregated for reasons other than those related to performance outcomes and thus testosterone is being used arbitrarily to prevent direct competition between male and female athletes Without a critical examination of the way testosterone is being used to 'naturally' segregate athletes on based on sex, women's sport organizations are unlikely to pose significant challenges to the dominant ideologies that support gender difference in established sport systems (Hargreaves, 1990) within the "larger institutional and cultural contexts in which gender difference and hierarchy are constructed" (Messner, 2002, p. 158).

Sex Segregation

Dixon (1999) argues that a central purpose of competitive sport is to provide an accurate measure of athletic superiority, than segregation based on sex can be viewed as

one of a number of situations[14] in which competitive sport fails to achieve its central comparative purpose. The a priori commitment to sex segregation in sporting contexts is rooted in ideologies of 'natural' difference that reinforces an 'oppositional binary' and acts as a vehicle for continued oppression rather than a strategy to enable resistance and transformation (Birrell, 1984; Kane, 1995). Refusing to allow girls and women the opportunity to compete against boys and men not only fails to provide an accurate comparison between athletes of various skills and experiences, but it also conflicts with true equality of opportunity, which is one of the identifiable goals of liberal feminism.

Clearly, the playing field is not open to all women; in fact, many can't even get on it without being accompanied by an invitation, a certificate of femininity, and in the case of transsexual athletes, gender recognition certificates. Although certain women have been integrated temporarily into men's events, on a case-by-case basis, direct competition between male and female athletes remains an illusive reality. Although the entrance of transsexuals into sport seems to challenge taken-for-granted assumptions about gender arrangements and ideologies, it actually reaffirms and reproduces our cultural notions about sexual difference (Birrell and Cole, 1990). In this sense, the IOC policy reflects the ability of institutions to naturalize women through a discourse that legitimates sex reassignment by working to alter what is presented as fixed. Ironically, by forcing athletes to "rectify any sexual ambiguity" (Ljungqvist, 2004, p. 1) the IOC Policy has forced other sporting bodies to question the rationale for sex segregation in those sports unaffected by the gender of its participants. By doing so, they have produced the conditions which may ultimately undermine the ability of organizations to determine

[14] Others include referring errors, cheating, gamesmanship, bad luck, inferior performance by superior athletes, etc.

strict eligibility guidelines in future competitive environments. In the end, these ideological justifications for maintaining sexual difference based upon biology tip the scales in favour of male sporting participants.

Throughout this chapter, I have shown that the IOC policy on transsexual athletes relies on the social status of testosterone as the male-sex hormone to divide athletes into categories based on sexual difference. Using testosterone to arbitrarily segregate athletes into social categories of man and woman undermines the rationale for segregation in which there is no physiological reason to do so. This position not only produces male athletes as the inevitable champions of sport, but also presumes the outcome of direct competition between the sexes prior to any evidence that would support it (Hood-Williams, 1995). The logical outcome of the discourse surrounding eligibility is to allow female athletes to compete against men in those sports, which are seemingly unaffected by the gender of the participants.

Chapter 3

Testosterone and Performance Advantage

This chapter critiques the gendered performance differential between male and female athletes, known as the Gender Gap,[1] by identifying the link between testosterone and advantage in the IOC Policy. Using this framework, I argue that the 'natural' presence and absence of testosterone in the male and female body respectively, confers an inherent performance advantage to athletes born male. My analysis will focus on the role that testosterone plays in constructing performance advantage by preserving access to the 'essence' of athletic performance to male-born athletes. The outcome of this discourse should force sport governing bodies to consider whether allowing the use of testosterone by female athletes to reduce gender-based sporting inequities is a desirable option.

The purpose of this chapter is to demonstrate how testosterone constructs performance advantage in a way that privileges male over female athletes by examining the assumptions that form the basis of the IOC Policy in relation to the larger discourse. First, that testosterone is solely responsible for the advantage that male athletes enjoy; second, that women are disadvantaged in sport because they cannot compete on par with their male counterparts; and third, that a 'natural' advantage can exist outside of the social context in which it takes place. The advantage discourse is composed of three key elements: one, women differ physiologically from men and the gender gap is a social reflection of these 'natural' differences; two, drug testing is crucial to prevent the use of

[1] In this paper, the Gender Gap I refer to is considered a performance difference between the top men and women at the highest levels in sport, assumed to be somewhere in the region of 10% (Whipp and Ward, 1992).

'male' hormones by female athletes to ensure that sport reflects gender difference; and, three, feminist arguments for an adapted model of sport participation will lead to positive discrimination that benefit women in sport overall. Each of these assumptions relies on the construction of gender difference in sport, whereby the presence and absence of testosterone in the male and female body respectively, confers an inherent performance advantage to athletes born male. As such, testosterone now acts to prevent access to the *essence* of athletic performance to female athletes, which is discriminatory.

At the level of high-performance sport, men are presumed to possess an inherent performance advantage over women due to testosterone exposure (Gooren, Mathijs, and Bunck, 2004) associated with male puberty. This contributes to the widely held view that it is unfair to match male against female athletes in direct competition (Teetzel, 2006). For this reason, male-to-female athletes are often viewed as having an unfair advantage over competitors who are female at birth. Where female-to-male athletes are concerned, the required use of 'male' hormones to complete the process of transition (and maintain 'maleness') is often aligned with anti-doping issues, given that testosterone is considered a banned substance. The problem then becomes one of deciphering between the use of testosterone for legitimate therapeutic purposes vs. illicit performance-enhancement, which effectively limits these athletes from participation (Reecer, 2005).

IOC Policy

Given that testosterone exposure associated with male puberty is linked to performance advantage, the ability to reverse the impact of both the previous and residual effects of testosterone during the sexual reassignment process is the primary concern regarding the ability of male-to-female athletes to compete fairly with other women in

sport. As such, athletes must undergo a two-year waiting period to clear testosterone out of their body and eliminate any physical advantages associated with their male birth sex. Michelle Dumaresq says the IOC's policy is appropriate.

> I believe that there should be a waiting period to eliminate the physical advantages...I know personally how long my body took to change, and two years is plenty (in Hui, 2004, p. 1).

The rationale behind the two-year waiting period represents the minimum time frame that officials agree it takes to remove testosterone from the athlete's system, which coincides with the two-year suspension handed down to athletes who have failed their doping tests in order to return their hormones to original levels. However, given that this would not be relevant where female-to-male athletes are concerned, this stipulates that advantage only applies in one direction: from male to female.

Advantage

The perception that testosterone is solely responsible for the performance advantage that male athletes enjoy is perhaps the biggest hurdle facing male-to-female transsexual athletes. Renée Richards is adamant that male-to-female transsexuals do possess competitive advantages based on their physiology. Hormone therapy, she argues, "is not much different from steroids, and no amount of therapy can change the basic physiological heart and lung differences" (in Sez, 2004, p. 2). There are generally two different points of view in relation to the link between testosterone and advantage. One side of the debate argues that a physiological advantage does exist due to the influence of testosterone during male puberty, which contributes to a greater potential for muscular size and strength, heart and lung capacity, and muscle-to-fat ratio (ASC, 2005). The other side of the debate argues that a physiological advantage does not exist given the massive

doses of estrogen (and progesterone) that male-to-female athletes are required to take, which prevents the further development of testosterone. This process therefore decreases individual strength and causes them to lose many of the physical advantages of being male (ASC, 2005).

For those who argue that an advantage does exist, the effects of testosterone are said to have an influence either in relation to the physical demands of the sport itself, where advantage would vary depending on the sport of each individual competitor;[2] or in relation to physical training, where advantage would depend on whether the individual had trained heavily between his adolescent growth stage and sexual reassignment.[3] The discourse surrounding Michelle Dumaresq seems to indicate that she is advantaged in relation to the physical demands of the sport itself. According to other racers, downhill mountain biking:

> Demands competitors be some of the best built, most aggressive athletes in the world. A typical race involves hard slogging down several kilometers of steep dirt hills, often at speeds of more than 60 kilometers an hour, while navigating around obstacles and over cliffs that are often two meters high.[4]

Since Dumaresq grew up hormonally male, many competitors believe she has a physical edge in the women's category. When asked what kind of advantages she has, in *100% Woman*, other riders mentioned the differences between her muscular size and strength and their own.

> Physical, definitely, she weights about 50 or 60 pounds more than any of us. And she's way stronger. She's got a lot more upper body strength. Downhill is so much upper body strength, so much leg strength; it's just so physical (Cassandra Boon).

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[2] According to Dr. Tony Millar of the Lewisham Institute of Sports Medicine (www.ausport.gov.au).
[3] According to Dr. Brian Sando, a senior medical director for the Australian Olympic team (www.ausport.gov.au).
[4] Taken from an article originally found at http://www.transgenderzone.com/features/tgbiker.htm

> Michelle's stronger she's got to be stronger. She's got more muscle tissue; you're born with more muscle tissue so you can't actually lose it (Kathy Pruitt).
>
> You can't diminish the number of muscle fibers you have, to be fair with us your bones, heart, lung, everything (Sylvie Allen).

These comments show just how much Dumaresq's 'natural' muscular size and strength, real or imagined, factors into the belief that she should not be able to race against other women on the downhill circuit. Regardless of the outcome, allowing Dumaresq to compete at all is unfair, presumably because she has a prior advantage at the starting line that other riders do not reflected in the following statements made in *100% Woman*.

> If she were to win Canadian Nationals and I were to get second or third or any of us girls, to stand there and watch someone who I feel cheated, take the title, I think I'd feel awful. It would really, really, bother me (Cassandra Boon).
>
> I respect her in so many ways, but as far as results go, if she wins or loses, it doesn't matter to me; it's still unfair (Claire Buchar).
>
> I do see her on the downhill course and do feel like this isn't right, like this isn't fair, like I watch her muscle her bike around...it makes a few of the girls nervous out there (Melissa Buhr).

These comments are similar to ones made about female athletes who have used performance-enhancing drugs in competition with 'natural' athletes who have not. For example, Becky Scott, who placed third at the 2002 Olympics in Salt Lake City, was awarded the gold medal in the 5km cross country event when the two competitors who finished ahead of her, Olga Danilova and runner-up Larissa Lazutina were stripped of their medals for testing positive for darbepoetin, a drug that boosts the production of red blood cells, which carry oxygen to muscles (CAAWS, 2005). Scott expressed frustration that no matter how hard she trained, other athletes constantly thwarted her efforts by

doping. In this way, male-to-female athletes are aligned with cheating through their (historical) use of testosterone, which relegates them to the same status as other doped athletes, whose participation is viewed as inherently unfair regardless of the final outcome. However, whether this is a *fair* assessment or not has not been featured in this discourse.

By contrast, the discourse surrounding golfer Mianne Bagger indicates that any advantage she has over other female competitors would be less of a factor in the overall outcome, because the sport of golf relies on skill to a much greater extent than strength. On Bagger's website, under the "sports" section, she claims:

> The main issue of concern when the issue of gender variant conditions come in sports, is that of a *'man'* competing in women's sports and the obvious unfair advantage that would exist...For me, being a sports woman, the issue of strength and perceived unfair advantage has been (and is) my biggest hurdle. Understandably so I guess.

Bagger provides no challenge here to the issue that men *obviously* have an unfair advantage and *understandably so;* her argument is that she doesn't have one. However she does challenge assumptions concerning unfair advantage in relation to transitioned women under the "some facts" section on her website.

> In the case of sports, there is one main issue of contention amongst most people which is very much misunderstood. That issue is of a *perceived* 'unfair advantage' that transitioned women might have over other female competitors due to *presumed* additional strength. The two key words here are 'perceived' and 'presumed'. This is because nobody has actually addressed the medical science behind physiology and subsequently it is not common knowledge.

The discourse of Tiger Woods notwithstanding, Bagger argues that her game is no different than any of the other top amateurs in the country whom she has been playing with. In fact, "there are a number of girls who hit it further than I do" (Hadfield, 2004, p.

3). On Bagger's website, under the section "some facts" is a chart that shows the average driving distances for women on the Ladies European Tour (LET) in 2006. According to this chart, Bagger's driving distance of 237.85 yards places her in 163rd spot when ranked in comparison to the top 10 women on the tour whose drives range 37.15 – 62.19 yards above her own.

> I am much shorter than most of the girls out here. My drives average only just over 200 yards, whereas my golfing idols like Karrie Webb, Laura Davies and Annika Sorenstam hit it 260 to 270…I have a very tidy short game, and I putt well, that's really the secret of my game (p. 2).

Thus, in order for Bagger to make her case, she must show evidence that she operates at a disadvantage in relation to other women on tour. In this sense, Bagger faces the issue of advantage in a way similar to Dumaresq. Although the perception that strength contributes more to success in mountain biking than it does in golf, exposure to testosterone seems to present less of a concern in Bagger's case. However, these arguments that an unfair advantage does exist for the male-to-female athlete is countered by those who claim that the addition of estrogen to the male-sexed body removes any and all physiological benefits that their previous exposure to testosterone has afforded them.

Disadvantage

For those who argue that a physiological advantage does not exist, the large doses of estrogen and progesterone that male-to-female athletes are required to take is believed to negatively affect performance and actually places them at a disadvantage in relation to other female competitors. Jill Pilgrim, general counsel and director of business affairs for USA Track and Field Inc. argues that a performance advantage does not exist because

> Taking female hormones causes male-to-female transsexual athletes…to lose muscle mass, which is the advantage testosterone gives you (in Chuck, 2006, p. 1).

Here, female hormones are both the cause and effect of disadvantage because their presence in the body indicates that testosterone is absent and therefore advantage no longer exists. Both Dumaresq and Bagger cite medical evidence to support their claims that a significant reduction in testosterone levels has diminished any previous advantage they once had (Fish, 2003). They point out that hormonally they're women too, having less testosterone in their bodies than her opponents assigned female at birth. According to Bagger:

> I may not be genetically female, but I am hormonally female. My testosterone is only 1.8 nanomoles per liter. For a male, normal testosterone is from 8.5 to 30 nanomoles per liter and for females the range is 0 to 3.7. So if anything, I'm testosterone deficient. It simply is not true that I have extra strength...now I am about as strong as a normal pre-menopausal woman (Anyone For Tee, 2004, p. 2).

Here Bagger posits that a cause and effect relationship exists between testosterone and strength levels, which presume a direct correlation between her 'testosterone deficient' body and her 'lack' of strength. She maintains that since her levels fall in the range of a 'normal pre-menopausal woman,' so too must her strength. The problem with this statement is that we don't know what Bagger's past strength levels were, or are at present, and whether they result from diminishing levels of testosterone or a multitude of other factors that contribute to individual strength levels in both men and women.[5] Further, given that the age of a 'pre-menopausal woman' varies considerably from one woman to another: the norm is 45, with a normal range of 35 to 55,[6] it would be impossible to predict what 'normal' strength levels are in this highly divergent

[5] Other factors include: previous background, training experience, technique, intensity, diet, nutrition, genetic predisposition, muscle memory, etc.
[6] Values taken from http://www.menopause-pms-progesterone.org/menopause/premenopausal.html

demographic. She also maintains that these changes take on a permanent and irreversible status, which according to Bagger, forces her to rely more on accuracy.

> Typically our levels of testosterone are lower than the average levels for women and recent information indicates that we are basically left at a disadvantage compared to other competitors (Bagger, 2007).

> The overall loss of strength that I have experienced is quite significant and as far as golf goes, I don't hit the ball as far as I used to be able to … and I also can't get the back spin I used to (Schadler, 2005, p. 2).

Dumaresq also reflects this relationship between the perceived absence of testosterone and its link to advantage. She has reportedly lost 3 inches and 30 lbs from her six foot-210 lb frame (putting her current height and weight at 5'9 and 180lbs) along with the ability to build and retain muscle mass, bone density and considerable strength. She attributes these changes to several years of treatments involving androgen blockers, estrogen and progesterone.

> I have lost the ability to build muscle and have lost the muscle mass that I once had—gone…I work out constantly just to try and maintain a strong physical fitness level (in Hui, 2004, p. 2).

This statement gives the impression that without male levels of testosterone, athletes are at a complete loss in terms of strength and muscle mass with little hope of changing their situation. Although Dumaresq has indicated that her height and weight has been reduced overall, there is no indication of what her muscle-to-fat ratios and strength levels were prior to her transition from male-to-female. Therefore, to say that her muscle mass is 'gone,' is a comparative description relative to her previous levels. The fact that she has lost what she once had doesn't mean that her now testosterone-free body is also muscle-free. Given that she competes at the elite level in a sport that seems to require a level of physical strength and muscularity that 'average' women may or may not be able

to acquire contradicts this claim. Dumaresq may or may not feel this type of claim is necessary to put her physically on par with other female athletes. However, the discursive effect of these comments alters her relationship to testosterone, which removes the threat she poses to other female competitors born without this 'natural' advantage.

Dr. Jerrilyn Prior, a leading endocrinologist and researcher who pioneered the use of female-sex hormones in gender reassignment therapy, agrees that hormonal changes cause a reduction in musculature, but is more careful to say that "the heavy musculature that's typical of testosterone in some men, will decrease" rather than to indicate that all muscle mass in all men will be gone forever as Dumaresq does (Wilson and Duthrie, 2004). Rather than the drastic reduction linked to Dumaresq, Bagger claims that when she started hormone replacement therapy (HRT), she noticed a loss of overall strength that was more gradual and difficult to measure. On Bagger's website she describes these changes:

> It's not like we wake up one morning feeling suddenly weaker. The changes our bodies go through can be likened to that of going through puberty...for me it meant that, after time, I wasn't able to lift things I was once able to lift, and with my golf, it means that I don't hit the ball as far as I used to. It's hard to say exactly what the difference is as equipment has changed so much. Clubs have been improved and balls also fly further (Bagger, 2007).

In these and other statements made by Bagger, she doesn't mention what her original height and weight measurements were in order to provide a comparison to her current 5-foot-10-150lb frame. Although Bagger is an inch taller and thirty pounds lighter than Dumaresq (at 5-foot-9-180lbs), her physique seems better suited to a sport like golf, which requires a high degree of skill. She may have a harder time gauging differences,

given the equipment and technology available to her may compensate for any real or perceived loss in strength. Bagger also claims:

> The main reason for the difference in strength between men and women is that men have the 'male' hormone testosterone. Men have much higher levels than women and it's what enables them to build up much larger amounts of muscle mass and strength. Without testosterone, increasing muscle mass and strength becomes impossible (naturally) (Bagger, 2007).

The use of the word 'naturally' in relation to the presence of testosterone in the male body is misleading. Considering that testosterone is also 'naturally' present in the female body, Bagger's comments imply that the only way she could, as a woman, increase muscle mass and strength would be to do so by 'unnatural' means. Like Dumaresq, the discursive effect of Bagger's comment alters her relationship to testosterone in order to remove the threat she poses to other female competitors born without this 'natural' advantage. However, unlike Dumaresq, Bagger implicates other women who are able to build muscle mass and strength as 'doped' athletes, because they 'lack' the 'natural' testosterone to do so. She continues her claims of disadvantage and deficiency for the *ABC Primetime* documentary, *Different Strokes*, when she says

> My testosterone levels are lower than the average levels for women which is also not ideal. It has been recommended to me by my doctor that I take testosterone to get my levels to normal levels in the same way he prescribes it for other women. The thought of taking testosterone (to get my levels to normal female levels) to me though is a frightening prospect, and I don't feel comfortable taking it. Basically for fear of any masculinizing effects (in Schadler, 2005, p. 2).

That Bagger fears the effects of normal female levels of testosterone in her (now) female body is interesting in this context. Her choice to remain deficient and disadvantaged in comparison to other women in sport (by disregarding her doctor's recommendations to increase her testosterone levels) *for fear of any masculinizing effects*,

indicates that she is placing a greater value on a feminine gender performance than a successful sporting one. In this way, she is similar to other female athletes whose fear of the association with all things masculine hinders their ability to achieve their full athletic potential. However, given the disciplinary surveillance she is under, both as a transsexual woman and a female athlete, it is not surprising that she is inclined towards behaviour that accentuates (and confirms) her femininity, avoiding anything to tip her physical appearance over to the masculine side (and therefore tending to shy away from sport or significant training). However, the following statement is contradictory:

> I've only recently started to go to the gym again. That may seem surprising for an athletic, competitive person who hopes to be, someday, one of the best golfers in the world. But you see, for me, for all transsexual women, the last thing you want to do is bulk up. There is just that fear of looking masculine. It is the last thing we want to do, and it has always been a fear of mine (in Schadler, 2005, p. 2).

This statement is contradictory not because she fears looking masculine, but according to her current status as 'naturally; *deficient* and *disadvantaged*, which she attributes directly to the testosterone-free status of her (now) normal female (pre-menopausal) body, the idea that she could 'bulk up' seems like a practical impossibility. Her fear of bulking up through normalizing her testosterone levels to that of other women and, as a result, becoming masculinized is significant. On the one hand, she has gone to great lengths to prove that her 'lack' of testosterone makes her eligible to compete on par with other female athletes. On the other hand, she fears that the addition of testosterone to her (now) female body would have masculinizing effects. Although, it doesn't follow that if she can no longer produce, absorb, or utilize testosterone in its natural (or synthetic) form that she would bulk up as a result of its presence in her body. Thus, her concern seems unreasonable.

These comments implicate Bagger in discourses where the disciplinary performative of femininity supersedes women's desire to engage in the disciplinary performative of sport. As such, she aligns herself with the same types of disciplinary regimes that other female athletes are subject to who also fear the effects of weight training to enhance their sport performance. Although most athletes are certain that men are bigger, stronger, and more muscular than women because of testosterone, and that, without it, women cannot develop the type of physique men are capable of 'naturally,' there remains this fear of 'bulking up' that lies in direct contradiction to the discourse surrounding testosterone. Either, testosterone is solely responsible for muscle mass and strength (and female athletes have an imagined fear that 'bulking up') or testosterone is not solely responsible for muscle mass and strength (and female athletes have reason to fear 'bulking up' as a real possibility). However, the way the discourse currently operates is that although testosterone is solely responsible for men's muscular strength development, women should still fear that 'bulking up' is possible.

The physiological changes (reduced muscle mass, bone density, height, endurance and strength) caused by testosterone loss are the main focus in almost every print, on-line, documentary, and news media source that deals with the issue of transsexual participation in sport. As such, the absence of muscle is presented as a critical indicator to establish 'proof' that male-to-female athletes are no longer *under the influence* of testosterone and thus a threat to female athletes *under the influence* of estrogen. Female athletes believe they lack the necessary testosterone to gain the physical size and strength of men, yet fear that physical training will masculinize them. This logic makes no sense, but it effectively convinces women in sport of three things:

1. All females are born with characteristics that are inherently feminine, which are 'naturally' expressed through the female body as femininity.

2. Women are just not biologically suited for muscular development because they 'lack' the necessary testosterone.

3. Women's bodies are, and must remain, naturally weak in comparison to men's bodies, which are, and must remain, naturally strong.

This type of analysis is useful to show how traditional gender codes work throughout sport to dissuade female motivation towards the type of muscular development connected to masculinization (Giulianotti, 2005), unfortunately real or imagined. It also reveals how a feminine gender performance is constructed as a 'natural' expression of femininity, when in fact it seems more like a deliberate attempt to promote the absence of masculinity. However, the fact that few seem worried about female-to-male athletes dominating men's sport (Tuller, 2005), even with the use of testosterone, indicates that advantage is constructed in relation to the gender of the participants.

Female-to-Male

Female athletes are considered to be physiologically disadvantaged in sport because their performance is viewed as less remarkable than their male counterparts. While there is extensive debate around the issue of advantage as it pertains to male-to-female athletes, discussion related to female-to-male athletes, however, is focused on what effect the addition of testosterone has on sport variables related to competition (Gooren, Mathijs, and Bunck, 2004). This view reflects the well-established notion that an athlete born female is at a physiological disadvantage to an athlete born male in spite of any individual performance characteristics that may suggest otherwise. While there have been elite female athletes who underwent the process of sexual reassignment to become men, such as skier and cyclist Eric (Erika) Shineggar and shot-put champion

Andreas (Heidi) Krieger, they did so after they retired from competition with other female-born athletes.

The absence of female-to-male athletes in high-performance sport, both in actual number and discursive representation, is consistent with the overall failure to consider the possibility that some women may be able to compete with men at the elite level. The fact that there is only one female-born athlete, Keelin Godsey, who self-identifies as male with aspirations to compete at the Olympic level is also indicative of this. Given that Godsey is currently biologically female, as long as he refrains from the use of male hormones, such as testosterone, he faces no other obstacles competing against women for a gold medal (Oakes, 2006). In fact, Keelin believes, and his coach, Jennifer Hartshorn, agrees, that in order for him to be in fair competition, he must compete as female, because he 'lacks' the strength to compete with men in a field, "which is mostly brute strength, plus technique" (Grossfeld, 2006, p. 2). It is unclear in these statements if Godsey and/or Hartshorn are referring to his ability to compete with men as he is now (female prior to SRS and HRT) or as he will be in the future (male upon completion of SRS and HRT).

Godsey's plans to put off sexual reassignment to compete in the women's category may mean that he feels he has a better chance as a female against women than as a male against men. It could also mean that he wants to continue his sporting career without the interruption of SRS and HRT and/or does not want to wait an additional two years after the sexual reassignment process to compete at the Olympic level. If so, he would not be eligible to compete until the 2012 games, a full five years away from his present athletic success at the national level. These are legitimate concerns from an

athlete's perspective. However, they represent a failure by the IOC to contemplate the ways in which female-to-male athletes present different considerations than their male-to-female counterparts.

There seems to be little concern that advantage would apply in the opposite direction (female-to-male) or that women would ever pose a significant competitive threat to male athletes in most sports. Dan Schroeter, Danika's father, argues that men "certainly don't have to worry about precedent - pending the X-men jumping from the silver screen to real life, this situation will never, ever confront men in sports."[7] The suggestion being that even with the addition of testosterone to the female-sexed body, women will never be able to compete on par with male athletes, ever. These kinds of statements support my claim that the (presumed) 'essence' of superior athletic performance is reserved exclusively for male athletes. Also, that testosterone is so 'unnatural' to the female body that even the addition of synthetic hormones cannot make up for the biological 'lack' that produces female athletes as 'naturally' inferior to their male counterparts. Unfortunately, like his daughter Danika, he fails to understand the effects of testosterone in the body. However, when competitors like Dumaresq are represented as hulking steroid-induced figures, as in *Sports Illustrated*, it is not hard to see why.

> The before and after picture is fascinating to ponder. Just imagine a heavy steroid user going cold turkey, deflating in front of your eyes (Fish, 2003, p. 2).

In this representation, the physical transition from male (man) to female (woman) is equated to "a heavy steroid user going cold turkey." This is both an unfair and

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[7]These comments were taken from a Canadian Cyclist discussion forum at the following link: http://ccforums.ipbhost.com/index.php?s=d5913f827f69f6d179a0fb8abdd89033&showtopic=6043&st=45&p=60253&#entry60253

inaccurate assessment of the physiological changes that take place during the process of transition. By making this comparison, Fish implies that Dumaresq has abused the 'natural' presence of testosterone in her former male-sexed body in a similar fashion. However, the physical difference in size and strength between 'a heavy steroid user going cold turkey' is significantly greater than it would be between a man and a woman in general, and male and female athletes in particular. To argue that a 'man' is a steroid-enhanced version of a 'woman' is a completely inaccurate description, given heavy steroid users typically have used (and abused) synthetic testosterone, along with a combination of various other pharmaceuticals,[8] that place his body weight, muscular size and strength far above anything that could be accomplished by other men, including himself, 'naturally.' These kinds of statements give the impression that the only way to level the playing field between men and women would be to allow enhanced female athletes to compete against 'natural' men to make up for their apparent 'lack.'

Although there is support for the view that male-to-female athletes retain a 'natural' advantage over other women in sport, there is no similar logic that attributes advantage, 'natural' or otherwise, to female-to-male athletes over other men in sport. Even with the addition of testosterone, unless treated prior to the end of puberty, female-to-male athletes are thought to remain less competitive when matched against male-born athletes, due to their shorter statures and lower bone mass (Gorton, Buth, and Spade, 2005). It is only the extent of this disadvantage that remains in question. However, it seems logical to assume that the addition of testosterone to the elite female-to-male

[8] The assumption that heavy steroid users only use synthetic testosterone to achieve their physical development ignores the multitude of other training, diet, supplements and performance-enhancements used to acquire and maintain their enormous physique, such as: DHEA, insulin, IGF-1, growth and thyroid hormone, diuretics, Halotestin, Modafinil, Nolvadex, Prozac, GHB, melanin, cocaine, ecstasy, Nubain, clenbuterol, and albuterol, among others.

athlete, particularly in sports which are divided according to weight classes, may in fact prove advantageous in direct competition with men. Whether the sexual reassignment process (fails to) advantages female-to-male athletes in men's sport or merely offers the potential for them to compete on par with their (now) male peers, it makes little sense to restrict the use of testosterone among female-to-male athletes in the hopes of regulating advantage in athletes for whom it does not seem to exist.

Therapeutic Use vs. Performance-Enhancement

Drug testing is viewed as crucial to prevent the use of 'male' hormones by female athletes and ensure that sport reflects gender difference. The use of exogenous[9] testosterone remains a banned substance at the Olympic level for those female-born athletes not interested in sexual reassignment. In this sense, there is no other medically justified reason, other than transitioning to male, that a female athlete would be granted a Therapeutic Use Exemption (TUE) for its use. The issue becomes complicated when attempting to regulate testosterone in a way that would only allow female-to-male athletes to use it for the purpose of "maintain the medically recommended and appropriate testosterone level necessary for their reassignment" (IWG, 2000, p. 54) without allowing its use to enhance performance. How the medical community attempts to decipher between legitimate therapeutic use and illegal performance-enhancement seems like an impossible task.

There have been some solutions posed. Teetzel (2006) argues, normal free testosterone levels in men vary between 300-1000 mg/dL and are typically 100 mg/dL or

[9] Exogenous testosterone is a synthetic version of the 'male-sex' hormone that can be differentiated from the endogenous testosterone 'naturally' present in all human bodies.

lower in women,[10] raising a female-to-male athletes blood testosterone up to 500 mg/dL would place him in the lower normal range for men and would seemingly not produce any performance-enhancing advantages relative to his competitors who produce testosterone 'naturally' (p. 237). Another potential resolution has been to calculate a greater T/E (testosterone to epitestosterone) ratio and to amend the medical/doping codes to permit this ratio for female-to-male participants (IWG, 2000). On its surface, it seems that TUEs act as a way to allow *some* athletes to use banned substances to return them to a state of normal health that would otherwise act as performance-enhancements in *other* already healthy athletes. However, the problem with this type of discussion is that it runs counter to the basic assumptions made about the potential for female athletes to compete, with or without testosterone, on a level playing field with male competitors. In spite of what the allowable ratios eventually become, if the IOC policy presumes that male athletes retain a performance advantage due to testosterone, regardless of the gender they prefer to compete in, then attempting to regulate the use of testosterone by female-to-male athletes at all is unjustified, unless that use of testosterone is opened up to women who want to compete with men, without having to become men to do so.

In "Sports of The Times: I.O.C. Enters a New World and Stumbles," Roberts (2004) presents perhaps the greatest misrepresentation linking male-to-female athletes to drug use. She argues that the IOC policy "tempt[s] extreme risk-takers by approving performance-enhancing surgery (p. 1)...has opened up a Pandora's box "for future abuse by those frantic to do anything to gain an edge" (p. 3) [and that] "the credibility of

[10] Values taken from WebMD Inc. articles, available online at www.webmd.com

[19] The presence of a testosterone (T) to epitestosterone (E) ratio greater than four (4) to one (1) in the urine of a competitor constitutes an offence unless there is evidence that this ratio is due to a physiological or pathological condition (WADA, 2007).

Olympic records is just as vulnerable by the inclusion of transgender athletes as it is by the racing of drug cheats" (p. 2). Roberts is not alone, even French downhiller Anne-Caroline Chausson, a 7-time World Champion (as of 2003) had this to say in response to Michelle Dumaresq's presence on the women's downhill circuit:

> Today, we all fight against doping and try to be natural athletes...Don't we open a door for genetically modified athletes—or worse? Why not clone Carl Lewis to race against Marion Jones (Billman, 2004, p. 1)?

These statements support the notion that drug testing is crucial to prevent the use of 'male' hormones by female athletes, which explains why male-to-female athletes must construct 'hormonally' appropriate female bodies that fall within the accepted range of other female competitors[11] prior to competition. However, attributing male advantage to testosterone is inadequate for those who argue that sport performance is more complex than a single hormone (Sapolsky, 1997) and discriminatory for those who use this link to exclude athletes on the basis of a residual advantage tied to gender (genetic maleness).

Transition as a Performance-Enhancement

Although transsexual athletes routinely dismiss the idea that male athletes would undergo the process of sexual reassignment to gain a competitive edge over female participants, Teetzel (2006) argues that little discussion devoted to the impact that the transitioning process would have on athletes, regardless of their past performance capabilities, has taken place in the context of elite sport. As such, "arguments traditionally used to justify or explain transgendered athletes' choices are often not made with the context of sport in mind" (p. 242), thus it is important to consider whether transsexual athletes who suffer from gender identity disorders benefit from hormonal

[11] According to Dr. Robert Lyons, a psychiatrist and head of the South Australian Gender Dysphoria Unit.

therapy and/or potentially misuse therapeutic use exemptions (TUEs) to enhance performance.

> In a profession that is so competitive that some athletes are willing to risk their lives to gain the slightest edge over their competitors by experimenting with untested and unregulated gene therapies and using substances they know have contributed to the deaths of their colleagues, would it be unfathomable that an athlete would change his or her sex if he or she felt success would be more easily attained in the opposite sex division (Teetzel, 2006, p. 242)?

These kinds of claims, among others, reveal certain investments about whose interests are prioritized. To question whether the potential exists for male-to-female athletes to *take advantage* of sexual reassignment, a process mandated by some of the same experts that question the logic of their participation, is problematic for three reasons:

1. If transsexual athletes really 'suffer' from gender identity disorder, then relieving their individual long-term suffering should take precedence over the short-term effects this may have in relation to other athletes' final placing.

2. To question "transgendered athletes' choices" because they "are often not made with the context of sport in mind," has the effect of reducing sexual reassignment surgery to a mere performance-enhancer, rather than a lengthy process to alleviate individual suffering.

3. To argue that transsexual athletes are more likely than other athletes to potentially misuse therapeutic use exemptions (TUEs) to enhance performance is discriminatory.[12]

This strategy of questioning the motivations of those athletes who want to compete in, or against, the opposite sex category is not confined to transsexuals. Female athletes

[12] Waddington (2004) argues that the TUE system is subject to abuse by athletes in general. Among competitive cyclists, for example, there are concerns that "the claimed incidence of asthma is several times higher than that in the general population [with] no obvious medical reason why this should be the case and the suspicion must be that the widespread diagnosis of asthma among elite level athletes is part of a common strategy to avoid the normal sanctions associated with the use of performance-enhancing drugs...in some forms of anti-asthma medication (p. 13).

who want to compete in men's sport, without having to become men to do so, are also suspected of ulterior motives. For example, in a discussion[13] on *Sports Factor Radio*, in a that originally began talking about the issue of transsexual participation in sport, Warwick Hadfield (2004) asked whether the gap between the sexes is closing, "or are there other motives for women playing against men" (p. 6)? In other words, is the fact the women are now able to participate in men's sport a result of their actual physical skill and ability or is it just a *fad*? Rhonda Anderson points to two related issues: "whether or not these women feel the need to seek out elite male competition to take themselves to the next level" and/or in terms of promotion, if women playing with men "is a way to perhaps attract more attention and more interest from advertisers" (p. 6).

However, similar to questioning the motivation behind transsexual athletes who want to compete in the 'opposite sex' category to which they were born, the reasons why female athletes want to compete against men are irrelevant if they have the skills and abilities[14] that qualify them to compete at certain levels and/or it is discriminatory to prevent them from doing so. Allowing female athletes to compete in men's sport, some argue, can be very detrimental to girls and cause "psychological setbacks," particularly in young girls who "may not have [the] coping strategies" to deal with playing "against the guys on a regular basis and failing every time," which could be quite damaging to her self esteem and sends a "detrimental message to girls that the only worthwhile competition is

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[13] Other members of the panel included Matt McGregor, a sports psychologist and junior coach; Professor Mark Hargreaves, an exercise physiologist from Deakin University; and Rhonda Anderson, a former long-distance running champion and Director of the Department of Sport and Recreation in Queensland.

[14] In Chapter 2, I argued that allowing girls to play on boys' teams, only if they possess the skills and abilities to do so, hold girls to a higher standard than boys who do not have to meet this requirement. In this section, I argue that as long as female athletes meet the same performance and qualifying standards as other male athletes are required to meet, they should be allowed to participate. However, given that certain sports, such as golf, have rules adjusted to create different standards based on gender, this may be difficult.

competition against men" (Hadfield, 2004, p. 6-8).[15] For some feminists, however, the suggestion that women should (want to) compete with men privileges a particular masculine notion of male athletic superiority and lies in direct contrast to the philosophy of separate (sport) development for women in sport.

Philosophy of Separate Development

The philosophy of separate development is a popular strategy among sport feminists who fight for gender equity policies that favour female athletes in an attempt to make up for past and present inequities in the dominant sport system. Whereas equality typically means free from discrimination based on sex, gender, or race, for example, equity is "synonymous with fairness and justice...it is not just about treating everyone the same – it may also use positive action initiatives and measures to address existing inequities" (WSF UK, 2007, p. 1).

In relation to women's sport, gender equity is concerned with positive discrimination policies that allocate resources, funding, and opportunities in ways that favour girls (WSF UK); and "removing barriers and traditions that deter the full participation of women and girls...to give them a reasonable chance to pursue sport in any capacity (p. 2). These actions are designed specifically for women and deemed necessary to *level the playing field* in favor of female participants. Former CAAWS Chair Shawnee Scatliff argues

> It's not just a question of equal number of athletes on teams, there has to be equity in the services as well. If the men are travelling to an international tournament to get experience, you have to provide that opportunity for the women as well. If the men have three physiotherapists, the women have to have that as well (CAAWS, 2002).

[15] This comes from the same discussion on Sports Talk Radio.

However, while feminist sport organizations continue their quest for equal access, opportunity, and equitable division of resources, they do so within social divisions that are inherently unequal, which presumably[16] achieves equality within, but not between, these gendered categories. Many women participate in adapted versions of men's sport in line with conventional ideas about 'femininity' and 'masculinity.' This model[17] is rooted in fears that female athletes are subject to a growing 'mannishness' (Messner, 2002) and, as such, sport for women should be 'feminine-appropriate' (Hargreaves, 1990) to 'naturally' reflect gender differences between male and female athletes. Characteristics of this model include creating different versions of the same sport via rule changes designed to ensure the games women play require "less movement, less body contact, and very little, if any, body aggression" (Messner, 2002, p. 138).

Hockey is perhaps the best example of the adapted-model of sport for women, although there are many others. Using an assessment of Mary Jo Kane's (1995) "sport continuum" as a strategy to challenge the conceptions of sport as an "oppositional binary" in which gender is naturalized, Nancy Theberge (1998) uses her study on female hockey players to highlight "the many ways in which the construction of hockey and hockey players are distinctly social experiences" (p. 183). Female hockey players offered a number of contradictory assessments, however what is most evident in Theberge's study is that "the majority of women interviewed believe that women cannot compete successfully against men at the higher levels of hockey [because] men enjoy a natural advantage when it comes to what matters in hockey" (p. 194).

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[16] I say presumably here because the liberal feminist argument has been criticized for representing a white, western point of view that necessarily excludes some women in favour of others.
[17] Messner also refers to this as the ghettoization model.

Thus, it is not surprising that female-to-male athlete, Keelin Godsey, would choose to remain female for sports participation, given that his perceived ability to compete as male, against men, has been influenced by a larger discourse that tells him that male athletes are 'naturally' superior. Whether Godsey remains eligible to compete in the women's category is based solely on his use of testosterone. Proponents of sex segregation in competition worry that any potential closing of the existing gender gap would have a deleterious effect on the female body and invariably mean that women would "inject masculine values" into previous "pursuits played for enjoyment only" (Malszecki, 2001, p. 183). The fear that female athletes, who are not interested in transitioning from female-to-male, would choose to use testosterone as a way to 'take on' male performance characteristics lies at the heart of this discourse. This is evident in efforts to maintain the gendered performance differential between the sexes, known as the Gender Gap, where opposition to the use of testosterone by female athletes reveals that a masculinized woman is to be feared more than one who has transitioned.

Gendering the Gap

The origin of the disparity in athletic performances of male and female athletes, commonly referred to as the Gender Gap, is highly debated by those who believe it is a product of fundamental biological differences and others who believe it is the logical outcome of discriminatory social conditioning imposed by the sexist culture we live in (Seiler and Sailer, 1997). Those who support the fundamental difference model argue that women's participation in sport takes place under social conditions that are essentially barrier-free, therefore, the male hormone testosterone acts as a 'natural' substance, which divides athletes into gendered social categories that cannot be ignored. In this way,

female athletes who use testosterone to enhance performance transgress these 'natural' categories and, in doing so, lead themselves down a biological path of no return. Grete Waitz, who became the first female to break the 2-hour, 30 min barrier in the marathon during the late 70's and 80's when the event was not recognized as a race that women could or should excel at is often quoted in this debate saying that "As long as women are women, I don't think they will surpass men" (WSF, 2006).

Not everyone is convinced that female 'natural' inferiority will remain at its current status. According to scientists, the seemingly impossible prospect of a woman becoming the fastest person on earth is just a few generations away. There are two studies in particular that have analyzed the shrinking gender gap in running, whose results indicate that if current trends continue, female athletes will outperform their male counterparts. In a 1992 article titled "Will Women Soon Outrun Men?" Brian Whipp and Susan Ward of the UCLA School of Medicine compared the winning times of five Olympic running events that took place between 1900 and 1992, from the 200-meter sprint to the 26-mile marathon. Their research found over the shorter distances, women were improving at a rate double that of men and over the longer distances this rate of improvement was even greater. They concluded that "unless the progression rate of men's records increases relative to that of women, then [the mean velocity] for these events will be no different for men and women within the first half of the twenty-first century...Beyond that time, current progression rates imply superior performance by women" (p. 25).

In a similar study, Andrew Tatem (2004) and his colleagues at Oxford University compared the winning times for the Olympic 100-meters since 1900 and also found that

women have improved at a rate faster than men, even though both sexes have gotten faster over 100-meters. While men are about a second ahead of women in 100-meter races, they found no evidence that either male or female sprinters are reaching their limits of athletic potential. They concluded that women should overtake men at this distance by the Olympic Games in 2156, when, for the first time ever, the winning women's 100-meter sprint time of 8.079 seconds will be lower than that of the men's winning time of 8.098 seconds. One possible explanation for a continuing decrease in women's running times is that only a small minority of the world's female population has been given the opportunity to compete. Therefore, as more women have become emancipated over the past century, there has been a larger pool of females training to become top-class athletes. However, the findings of these studies are problematic for those who argue that 'natural' differences between men and women render these conclusions a practical impossibility. The culprit, they say, is testosterone, the 'male-sex' hormone which increases the production of red blood cells, oxygen capacity, and muscle power in men, who naturally and legally, have at least about 10 times as much of it circulating in their bodies than women" (Connor, 2006, p. 3).

In contrast, a 1997 study by Seiler and Sailer contradicted these findings and showed that far from getting smaller, the gender gap between male and female athletes is in fact getting wider. They examined the running performances of men and women over the past 40 years and discovered that, if the marathon is excluded, the average performance gap for other running events was narrowest in the 1970s and 1980s, but has increased from 11 percent in the mid 1980s to 12 percent in the mid 1990s. The reason they say is due to the illicit use of steroids that had made some female athletes more like

men. They concluded that while drug use reduces the physiological difference between sexes, drug testing, which counters use by male and female athletes, increases the gap (Seiler and Sailer, 1997). Further, they claim that in a lot of one-dimensional events like the 100-meter sprint or marathon, we are, in fact, approaching the limits of human performance. If this is the case, then the rise of the female athlete is set to hit a plateau that is well below that of the best male athlete.

There are problems with Seiler and Sailer's study and their resulting conclusions. First, attributing an increase in the performance differential between the sexes to a decreased use of anabolic steroids by women fails to acknowledge the ongoing use of anabolic-androgenic steroids use by male athletes that play a significant role in their ability to post more impressive records year after year. It is possible, that the times being compared may be the result of one or both sexes using steroids to enhance performance, rather than a reflection of 'natural' gender differences between athletes. Given the sheer number of male sprinters who have tested positive for exogenous testosterone,[18] including the Justin Gatlin the previous world-record holder,[19] the odds that we are now witnessing 'natural' male athletes consistently beating their previous performances is highly unlikely.

Second, their claim that drug testing has countered the use of steroids by male and female athletes is not supported by the numbers, which show an increased use of banned substances at International competitions. In 1986, positive anabolic steroid tests occurred

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[18] Since 2004, no less than 6 top 100-meter male sprinters, including the World Record Holder, Justin Gatlin, have tested positive for testosterone (or derivatives of) in competition (Lynford Christie, Carl Lewis, Dennis Mitchell, Tim Montgomery, Duane Chambers, among others).

[19] On April 22, 2006, Justin Gatlin, 24, tested positive for a prohibited anabolic agent at the Kansas Relay. On May 12, 2006, he posted a time of 9.77 seconds in the 100-meter sprint, which equaled the World Record performance of Asafa Powell from Jamaica. He has been granted an 8-year period of ineligibility that will run through July 24, 2014 (www.runnersweb.com).

65.3% of the time as compared to 38.1% in the year 2000. However, the actual numbers of athletes testing positive rose substantially from 439 in 1986 to 946 in 2000. This may be the result of better testing procedures, a reduced ability to detect certain compounds and/or athletes switching to designer drugs for which tests have only been recently developed. One such drug that would fall into this category is tetrahydrogestrinone (THG), which came to the attention of testing agencies in the summer of 2003 when the USADA received a tip and a used syringe containing a mysterious substance. Since that time, over 30 US athletes in track and field, football and major league baseball have been linked to the Bay Area Laboratory Co-Operative (BALCO) scandal.[20]

Third, to argue that men receive little benefit from the addition of exogenous testosterone to their bodies is a misrepresentation of the facts. What these authors fail to mention is that not only do male athletes take steroids in much larger amounts than female athletes, but they also have the ability to hide the masculinizing effects of highly androgenic substances that women do not. This enables them to cycle a greater number and variety of drugs, which prevents their systems from becoming accustomed to the effects of the same substance over an extended period of time. Women who use testosterone are able to do so in much smaller amounts and thus gain more benefit based on the amount of drugs used in *relational*, rather than *absolute*, terms in comparison to men. For example, a male athlete who has a 'natural' (endogenous) testosterone level of 1000 mg/dL could add another 1000 mg/dL through hormone therapy (exogenous) and,

[20] The athletes listed include 8 baseball players (Barry Bonds, Gary Sheffield, Jason Giambi, Jeremy Giambi, Armando Rios, Benito Santiago, Rafael Palmeiro, Bobby Estallella), 7 football players (Bill Romanowski, Dana Stubblefield, Josh Taves, Barret Robbins, Chris Cooper, Johnnie Morton, Daryl Gardener) and 16 track and field athletes (Marion Jones, Tim Montgomery, Regina Jacobs, Kevin Toth, Alvin Harrison, Calvin Harrison, Kelli White, Chryste Gaines, Eric Thomas, Michelle Collins, Ramon Clay, Melissa Price, Dwain Chambers, John McEwen, Zhanna Block, Olga Vasdeki) (USA Today, 2006).

in effect, double his original levels. However, a female athlete who has a 'natural' testosterone level of 100 mg/dL, but only added 400 mg/dL to reach the recommended level of 500 mg/dL, will have increased her original level five times. In "The Manly Molecule," Sailer (2000) argues that effective testing for steroids widens the gap between the sexes because:

> Sports are basically a test of testosterone. Since women on average only produce 1/10th as much of the manly molecule as men do, they get a much bigger bang for their buck from artificial male hormones. So, when everybody has to cut back on steroids, women are weakened more. Similarly, the marginal advantage steroids offer men is much less (p. 1).

These statements reveal an important contrast in how testosterone is constructed differently in relation to the gender of the participants. Not only does it present testosterone as more 'natural' to the male athletic body (from the marginal advantage steroids offer men), but it relates female athletic performance to the 'unnatural' use of artificial male hormones. Given that "sports are basically a test of testosterone," this also presumes that women operate at a disadvantage in sport given their 'unnatural' relationship to the 'male-sex' hormone. Thus, male-to-female athletes, who have a history of 'natural' testosterone use, are perceived to have an 'unnatural' advantage over other women in sport, which aligns them with doped athletes who use synthetic testosterone with the intended purpose of enhancing performance.

Using these numbers both at the top range for men and women, a female athlete would only need to use 1/10 of the amount of testosterone that male athletes would need to use to get similar effects. Thus, to deny that testosterone makes anything less than a significant contribution to men's physical training and competitive environments, is irresponsible. Further, to argue women's performances are directly contingent on the use

of testosterone, while men's are only slightly affected, in effect re-naturalizes the presence of testosterone in the male, but not the female, athletic body. This kind of performance analysis blurs the differences between the sexes and attributes superior athletic performance to a 'natural' progression on the men's side and chemical enhancement on the women's, which is not supported in practice.

Examining the gender gap in relation to the link between testosterone and advantage in the IOC Policy is important because feminist scholars have focused on inequalities in political and social arrangements (Messner, 2002), rather than how performance differences and potential are constructed according to the gender of the participants. Grounding athletic ability according to gender binaries (Theberge, 1998) positions testosterone as solely responsible for the advantage that male athletes enjoy, which places women at a 'natural' disadvantage that cannot be overcome through social conditioning. Attributing testosterone to a factor, which 'naturally' divides the sexes into social categories, draws attention away from the number of socio-cultural barriers that women continue to face in elite competitive environments.

The practice of excluding women from sport relies on disparities between athletes in terms of certain performance characteristics such as muscular strength, size, and endurance, which can be overcome through the use of testosterone to render these differences insignificant. Thus, if we accept the claim that female inferiority is linked to *male* hormones and thus presents a handicap to women in their struggle for equality with men (Oudshoorn, 1994), then the use of testosterone by female athletes should be considered a performance-requirement, rather than a performance-enhancement, aimed at reducing gender-based inequities in high-performance sport (Derenzo and Szafranski,

1997). In a conversation with Michelle Dumaresq in *100% Woman*, Missy Giove from the USA makes this observation:

> Funny enough what you're trying to do is the opposite of what I'm trying to do. I'm trying to get more testosterone. You're trying to lose yours and get more estrogen, you know, so I can get more muscle mass, so I can manipulate my hormones. Naturally, of course, I don't take steroids (Duthrie and Wilson, 2004).

Although Giove sees testosterone as a marker of difference between men and women, it's clear she attributes this difference only to the relative levels of testosterone in differently sexed bodies rather than the absolute presence or absence of testosterone in itself. Her belief in the possibility of 'naturally' increasing her own testosterone levels, presumably without the intent to transition from female-to-male, also reveals she understands that testosterone is not exclusive to the male sex. Her comments also identify a fine line between 'trying to get more testosterone...'naturally,' as opposed to the 'unnatural' process of using steroids for the same purpose. Therefore, she is aware of the implications of cheating and is clear that this is not her intended purpose. If the addition of testosterone to the female-sexed body, like the removal of testosterone from the male-sexed body, is unable to overcome the gendered disparity in athletic performance in the region of 10%, then why couldn't female athletes use testosterone as a means to compete with men without having to become male to do so? In other words, why does Missy Giove have to transition (and take testosterone) to compete against men in sport? Loren Cameron, a transgender activist and female-to-male bodybuilder argues the IOC "policy is unjustly prohibitive to any (transgender male) competitor...Why would genital surgery make (a female-to-male athlete) a more fair contender (in Marech, 2003, p. 3)?" Further, it is unreasonable to subject female-to-male athletes to the same conditions of

participation as male-to-female athletes in order to compete in men's sport. Clearly, the IOC policy privileges male-born athletes regardless of the gender they prefer to compete in.

Final thoughts

Feminist arguments for an adapted model of separate sport development continues to be one of the major social trends at work in women's sport that reinforces bipolar thinking (Messner, 2002) and fails to provide challenges to the social (re)production of gendered boundaries that maintain inequitable relations of power in sport. Upholding claims that male and female athletes have uniquely different characteristics, has the effect of locking athletes in a fixed concept of the 'natural,' "which ignores changing identities and different gender relations" (Hargreaves, 1990). Biological explanations collapse all other sources of difference (such as race, ethnicity, and age) into one single dichotomous variable that exaggerates the differences between men and women, and also minimizes the similarities between them (Kimmel, 2000). While testosterone may be a factor in athletic performance, it is naïve to assume that physiology alone differentiates the most successful performers, without taking into account other factors such as biomechanics, genetics, psychological makeup, skill, response to training, diet, coaching, equipment, etc., each of which have a significant impact on performance outcomes. All of these variables, apparently valid for both sexes, seem to get trumped in discussions about sport performance.

Whether or not we find it difficult to see a time when the best female will outperform the best male is irrelevant. While it may seem intuitively obvious to some, that athletes of one sex should not compete against athletes of the other in competitions

organized along sex-restricted lines "given the physiological differences that exist between men and women," it seems blatantly obvious to others that restricting sex along competitive lines constitutes a playing field that is neither fair nor even 'in disciplines for which the physiological differences between men and women offer no competitive advantage or disadvantage" (Reeser, 2005, p. 695). These comparisons made between the sexes that attribute 'natural' advantage to men based solely on testosterone fail to hold up each (and every) time a female athlete beats her male counterpart in direct competition. Thus, the fact that men and women continue to be segregated at the level of high-performance when there are women who are able to compete in the men's division reflects the social investments of those who are interested in maintaining 'natural' difference.

Although research has shown the many benefits that testosterone has for a muscular size, strength, and power, which are all key variables in athletic performance, it has not shown that testosterone is exclusive to men, nor is testosterone solely responsible for athletic performance. If testosterone is solely responsible for the success of male over female athletes without exception, then a 'lack' of testosterone would place male-to-female athletes at a physical disadvantage compared to her (now) female peers. If this is the case, how could the success of transsexual athletes at the elite level be explained? In other words, if testosterone is no longer produced in the athlete's body and without it, increasing muscle mass and strength becomes impossible ('naturally'), then shouldn't all athletes who undergo this process of sexual reassignment to female lose in every athletic contest regardless of the gender of the participants? How can we explain the success of Michelle Dumaresq as the champion of the Canadian National Championships for the

past three years in a row and Mianne Bagger who, as a top amateur, has consistently places in the top 10 finishers on the women's tour if this is the case? If male-to-female athletes can achieve success with a 'lack' of testosterone, then why couldn't women compete with men with this same apparent biological disadvantage? Why should we encourage the inclusion of one group of women, while at the same time forcing the exclusion of another?

Throughout this chapter, I have shown that the IOC policy on transsexual athletes relies on the social construction of testosterone as the male-sex hormone to act as a biological determinant in sporting contexts. The presumption that testosterone confers a competitive advantage to male athletes results in a performance differential that appears 'natural' and upholds the distinction between sex, gender, and performance in traditional ways. In this sense, testosterone has become the new arbiter in the construction of 'natural' difference in sport, which preserves access to the 'essence' of athletic performance to male-born competitors. The logical outcome of the discourse surrounding male advantage should force sport governing bodies to consider whether allowing the use of testosterone by female athletes to reduce gender-based sporting inequities is a desirable option.

Chapter 4

Testosterone and Gender Identity

This chapter examines the ways in which 'womanhood' is established in sporting contexts by examining the link between testosterone and gender identity in the IOC Policy. Using this framework, I argue that female athletes must demonstrate an 'unnatural' relationship to testosterone in order to be read as 'real' women. In this way, a feminine gendered performance appears 'naturally' counterproductive to athletic success. My analysis will focus on the role that testosterone plays in constructing a female athletic inferiority that appears to flow 'naturally' from 'real' women in sport and not others. The outcome of this discourse suggests that we must question the investments of those who wish to (re)establish women's sport as a 'women's-only' space.

The purpose of this chapter is to demonstrate how testosterone constructs gender identity by examining the assumptions that form the basis of the IOC Policy in relation to the larger discourse. First, gender identity is brought about by 'nature' rather than so-called environmental influences such as behaviorism or upbringing; second, individuals who suffer from Gender Identity Disorder (GID) have the deep conviction that they are 'trapped in the wrong body;' and, third, that "transsexuality is a medically diagnosable condition for which sex reassignment surgery (SRS) is the cure" (O'Hartigan, 1997, p. 46). As such, GID as an APA–DSM disorder is taken as evidence that male-to-female athletes never had an 'unnatural' identification with testosterone based on a female gender identity.

The identity discourse is composed of three key elements: one, structured narratives given by male-to-female athletes are used to produce and maintain a female

athletic inferiority that appears 'natural'; two, the effects of synthetic hormones in differently sexed bodies are taken as evidence that social inequality is rooted in biology and, three, feminist arguments for a separatist model of sport participation will preserve 'real' womanhood for female participants. Each of these assumptions relies on the construction of social difference in sport, whereby the presence and absence of testosterone in the male and female body respectively, is used to confirm the 'unnatural' relationship female athletes have to inherent problems that plague men's sport.

Gender identity is often described as an internal sense of oneself as either male or female and remains a complex issue in elite athletics, which has forced a number of sport governing bodies, such as the IOC, to reexamine their narrow definitions of gender (Reeser, 2005). Transsexuals are said to experience Gender Identity Disorder (GID), a DSM-IV (1994) psychiatric diagnosis, which is portrayed as a feeling of profound angst at the apparent disconnect between an individual's subjective gendered sense of self and their physical and social realities (Parkinson, 2004). Gender dysphoria is the medical term used to describe this condition and held up as the primary reason why transsexual people wish to change their sex (GIRES, 2003). GID is represented as a condition that can be corrected successfully "through the combination of biomedical and legal authorization of the exchange of the material signifiers that reconstitute sex status" (Birrell & Cole, 1990, p. 4).

> The materiality of anatomical sex is represented socially by a gender role, and subjectively as a gender identity: a (biological) male is a (social) man who (subjectively) identifies himself as such; a woman is similarly, and circularly, a female who considers herself to be one (Stryker, 2006, p. 9).

Securing a GID diagnosis is a necessary first step en route to becoming eligible to compete in the sex other than the one assigned at birth at the Olympic level. Without it,

transsexual athletes would not be able to meet the strict conditions of participation put in place by the IOC.

IOC Policy

According to the UK Guidance (2005), in sporting contexts, an athlete is regarded as transsexual if they a) have a deep conviction that the gender to which they were assigned at birth on the basis of their anatomy is incorrect (p. 3) and provide evidence of this medical condition known as gender dysphoria (p. 6); and b) have undergone both sexual reassignment surgery and hormone replacement therapy based on genuine medical need (p. 9). It should be noted that sexual reassignment surgery and hormonal therapy is one, but not the only way that individuals who are said to experience gender dysphoria choose to be treated (Gorton, Buth and Spade, 2005). However, those athletes who remain untreated, or choose to be treated in other ways by the medical establishment, are prohibited from competing in a sex not assigned to them at birth. This stipulation is deemed necessary, particularly in the case of male-to-female athletes because the sexual reassignment process is regarded as the only way to permanently relinquish any (and all) prior identification with the male-sex hormone testosterone.

However, there is considerable debate about whether the APA DSM-IV (1994) psychiatric diagnosis of transsexualism as a form of Gender Identity Disorder (GID) benefits or harms transsexuals. For example, O'Hartigan (1997) argues that transsexuals require the GID diagnosis to ensure there is a need for treatment, which the provision of health care is dependent. She claims that eliminating the diagnosis of GID will prevent "supportive parents from assisting their child's transition and acquisition of hormone therapy" and remove "the only available mechanism to leverage insurance companies to

cover the cost of SRS" (p. 46). In contrast, Wilchins (1997) argues against the GID diagnosis due to the potential harm it presents to transsexuals given it is often used as a weapon wielded against children who are gender non-conforming (Burke, 1996). She claims that eliminating the GID diagnosis will end the abuse of children who, in attempts to change their gender orientation, have been subjected to demoralizing behaviour modification, drug and electroshock therapies. Finally, whereas O'Hartigan sees the GID diagnosis as a way to seek equal protection under the law for individuals with physical or mental conditions, Wilchins doesn't believe that transsexuals are mentally ill, disordered, or disabled. In this sense, the GID as a medical diagnosis is a lie, which prevents trans individuals from claiming their basic civil (and human) rights. This is a view reflected by Mianne Bagger on her website:

> The reality is in fact that gender diversity exists only as a problem because of socially constructed stereotypes and the truth is that gender diversity/variance is simply an occurrence of natural human form and behaviour. There is no illness. No condition. No disorder. No psychological condition requiring treatment. In fact, many of the psychological issues that some people might suffer are quite possibly the influence of the pressures and anxiety induced by society through lack of acceptance a stigmatization. Despite this, some psychological/psychiatric associations or departments have kept such conditions alive and have subjected people (including children and their parents) to horrendous and archaic forms of behaviour and aversion type therapies in attempts to 'cure' such conditions.[1]

In the context of elite sport, the discussion of whether the GID diagnosis helps or harms transsexual athletes has yet to be taken up. But, clearly, the IOC controls access to the use of testosterone in two ways: drug-testing (for athletes without a GID diagnosis) and the use of a DSM-IV (1994) psychiatric diagnostic tool (for athletes with a GID

[1] http://www.miannegolf.com/overview.htm

diagnosis) to level the playing field in women's sport. Without the GID as a medical justification for therapeutic use exemptions transsexual athletes would not be able to compete. The IOC has significant investments in maintaining the status of GID as a psychiatric disorder for without it, they would not be able to justify restricting the use of testosterone to those athletes without a GID diagnosis.

Structured Narratives

Sport is a crucial site for the naturalization of social difference, which produces a structured narrative around gendered identities understood as meaningful and real (Willis, 1982). The IOC, as a male-dominated sporting institution, has disproportionate power to regulate and control the female athletic body by endorsing a clinical model that neglects the larger cultural context of gender arrangements (Birrell and Cole, 1990). Medical professionals have suggested that individuals seeking treatment for gender dysphoria must present the typical transsexual narrative or, in many instances, be denied care (Gorton, Buth, and Spade, 2005).

My reason for selecting narrative as a form of inquiry into identity is to reveal how identities are produced, negotiated and performed in the context of high-performance sport (Tsang, 2000). Guided by Laurel Richardson's (1995) assertion that "how we are expected to write affects what we can write about," this method provides a logical space in which to examine identity "as it allows for ambiguities to surface and for contradictions to coexist" (p. 45). Many transsexual athletes relate a similar story:[2] from their earliest memories feeling themselves to be very different from others of their assigned gender, while growing up expressing themselves whenever possible as that

[2] It is not my intention to question the truth of those narratives presented by transsexual athletes, only to situate those most represented in this discourse and their ability to reinforce traditional views of women in sport.

different gender, learning about and meeting others of their gender identity, and eventually transitioning to their appropriate gender (Beemyn, 2006). Thus, it is not surprising that representations put out by male-to-female athletes reflect a similar discursive strategy that, in essence, documents their struggle to resolve the mismatch between their gendered sense of self and physical reality. Mianne Bagger, for example, argues that the sexual reassignment process has 'naturalized' her body.

> We don't go through a sex *'change'*, but rather a sex 'correction' to bring our physical sex inline with our brain sex...we are commonly thought of as male with a psychological problem, when in fact it is more accurate to say we are female with a physical problem.[3]

Bagger came to the realization that "there was something different about me, compared to other kids, was when I was 6 or 7 years old" (Benson, 2005, p. 1) and recalls that the "experience was unbearable...I got thoroughly depressed. I got suicidal," she says. Transitioning from male-to-female allowed her to become the woman she had always "imagined herself to be" (Schadler, 2005, p. 3).

> This is something that was never a conscious decision for me...I grew up having something to hide and now that I have finally become 'myself', the last thing I want to do is hide a part of who I am from those around me...again.[4]

In *100% Woman*, Michelle Dumaresq provides a similar account.

> I was 5. I can't describe it. I just knew I was different. When I became aware that there's girls and then there's boys. There are certain things that the girls do that the boys aren't allowed to do, there are certain ways that the girls dress that the boys aren't allowed to dress and I didn't understand all that.

In addition to similar childhood experiences, Bagger and Dumaresq have shared views that a genetic predisposition to transsexuality exists. Bagger cites research that, to

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[3] Statements taken from Bagger's website located at http://www.miannegolf.com/ under the "my thoughts" section.
[4] ibid

her, proves that one's own core (gender) identity is determined by brain chemistry,[5] which implies it is something hard wired and established at birth. "There are many things that are influenced through environmental factors and upbringing, but not of one's gender. That has been proven many times from what I understand" (Benson, 2005, p. 3).

Dumaresq believes that "Your gender identity comes from your brain, and it's pretty overpowering," she says. "There were times in high school when I was just really confused. I'd ask myself, 'What is going on? I'm the captain of the damn hockey team!'" (Murphy, 2002, p. 1). In *100% Woman*, she describes how "there was this part missing from my male experience, what it means to be male and it just wasn't there." Her narrative is similar to Bagger's, having been raised as a boy, but always knowing that in the back of her mind that she was female. "I decided at 18 to change my gender. I've known I am a female since I was five" (Fish, 2003, p. 1).

> I mean I was raised and even though I lived as a boy, I always knew that I was a girl ever since I was a little kid. This was when I was 4 or 5 years old was when I first knew, so even growing up as a male, I tried to emulate what they did, but in the back of my mind I always knew I was female (Wilson & Duthrie, 2004).

For both women to claim their sense of self as female has been brought about by a genetic predisposition regarding brain sex has the effect of attributing gender identity to 'natural' constructs, which dis[illegible] the influence of environment in relation to transsexual experience. It would be impossible to speculate which came first: the feeling of knowing that they were differently gendered (feeling female in a male-sexed body) or the understanding that differences exist between genders (girls can do things that boys can't). As adults, however, both Bagger and Dumaresq recognize that a gender binary

[5] The publication of "A sex difference in the human brain and its relation to transsexuality" by Zhou, Hofman, Gooren and Swaab (1997) in the *International Journal of Transgenderism* is often cited to support these kinds of statements.

exists in society, which forces them to identity as one or the other. Dumaresq recalls that when she started the sexual reassignment process...

> You have to do what's called a real-life test, which is for 2 full years 24/7, that means your work, your family, your friends, living as a woman, but with the plumbing of a male, I was leading two lives and one took over the other. But I wasn't willing to let go of the other one until it became apparent that you couldn't do both (Wilson & Duthrie, 2004).

In this example, Dumaresq's subjective sense of herself as female (gender identity) prevented her from being able to live in the visibly male body (biological sex) she was assigned at birth. Through the process of transition, not only did it reaffirm her notion that gender identity is 'natural' and fixed, while the sexed body is malleable and changing, it forced her, in essence, to let go of one identity in favour of another. The inability for her to do both reflects the gendered structures of power in place to ensure that individuals feel compelled to make that choice. Mianne Bagger remains assertive about her identity as well.

> You know in this society, you have either got to be a man or a woman, male or female. And I'm certainly not male. So I'm a woman (Schadler, 2005, p. 5).

The interesting part about Bagger's statement is her use of terms 'man or a woman, male or female' in relation to each other. 'Woman' is usually made in reference to 'not-man' and 'female' to 'not-male' The fact that she claims to be a 'woman' on the basis of being 'not-male' indicates an identity in relation to her gender identity, not her biological sex. Although Bagger has a past identification with the label 'transsexual', her gender identity as a 'woman' remains unchanged. Dumaresq accepts her transsexual history, but says

> The title 'transgender' itself doesn't really fit any longer...You're only trans while you're living in transition. Why am I still calling myself that?

> *Transgender* is a medical term. This is not a medical condition. It's not the same feeling anymore (Billman, 2004, p. 3).

Gender to her is "a totally deep inside identity thing. How do you describe identity? You just know. It's invisible, but it's there, and mine was pretty clear" (Wilson & Duthrie, 2004). Bagger, in particular, finds the use of the term 'transsexual' offensive.

> As far as I'm concerned, I am a woman. I now live my life as such, just like any other and would like the media to be aware of the negative impact the continued use of this terminology [transsexual] actually has. Her plea to the media is that if the word 'transsexual' is to be used, then only use it if absolutely necessary and that it be used in the context such as 'transsexual woman' (the word transsexual in itself does not imply gender)" (Anyone For Tee, Bagger, 2004, p. 1).

Renée Richards sees issues of identity in a different light. Although she acknowledges "a lot of similarities" between her and Bagger, ultimately, "She's [Bagger] not original...She's a facsimile...we're the best women that we can be, but we're imperfect women" (Schadler, 2005, p. 3). In her autobiography, *Second Serve: The Renée Richards Story* (1983), Richards devotes the majority of her memoir to discussing her struggle to accept her gender identity, which included three failed attempts to live as a man before she was finally able to acknowledge herself as a woman (Beemyn, 2006). In recent interviews, she wishes she could have found some other way to deal with her gender confusion and even today is still unsure about the choices she's made. However, if we accept that there is no such thing as a perfect woman and thus, if all women are imperfect, then Richards fails to see that all women are 'facsimiles' of the same unrealistic standard that 'woman' has come to represent. In this sense, becoming a 'woman' is better defined as the relentless pursuit of perfection towards a socially constructed standard in which failure is inevitable (Butler, 1999).

This notion that some female athletes are imperfect women is based, in large part, on a medical perspective of transsexuality which privileges a connective relationship between physical anatomy, gender presentation and gender identity.[6] It is not surprising that the essential feature of gender dysphoria suggests a condition that is brought about by 'nature' rather than so-called environmental influences such as behaviorism or upbringing, commonly described as feeling trapped in the wrong body.

Writing the 'wrong' body

These accounts of the 'wrong' body lie at the heart of many personal accounts of transition (Stone, 1991, p. 286) and are opposed by theorists using a poststructural framework, in which gendered and sexual identities are both denaturalized and deconstructed. Those who oppose the 'wrong body' narrative (Bornstein, 1994; Feinberg, 1994) argue that it has led to the invisibility of transsexuality as an identity (Stone, 1991) and "assigns gender deviance only to transsexual bodies and gender normativity to all other bodies" (Halberstam, 1998, p. 154). In "The Empire Strikes Back," Susan Stone (1991) argues

> Few have taken the step of problematizing 'wrong body' as an adequate descriptive category. In fact, 'wrong body' has come, virtually be default, to define the syndrome. Under the binary phallocentric founding myth by which Western bodies and subjects are authorized, only one body per gendered subject is "right." All other bodies are wrong (p. 231).

For some, the trapped in the wrong body metaphor functions more as a short-hand used by transgendered people, rather than an accurate description of the experiences of most transgendered people. Nataf (1995) argues that individuals feel varying degrees of identification and belonging to sexed and/or gendered categories they were not assigned at birth. Thus, the 'wrong body' narrative implies that all transsexual narratives are alike

[6] Statements taken from the Press for Change website located at http://www.PfC.org.uk.

and denies instances of gender dysphoria within other subject positions. For example, in *Manliness*, Patrick Califia (1997) describes his experiences:

> My gender dysphoria has had more to do with feeling that there is something wrong when other people perceived or treated me as if I were a girl. Not wanting to be female, but not having much enthusiasm for the only other option our society offers (in Stryker and Whittle, 2006, p. 435).

Although the feeling of being trapped in the wrong body may not describe the experiences of transgendered people in general, it has come to represent the athletes included in this discourse. This has considerable implications for women's sport given the struggle to determine *which* body is the *right* body for female sport participants. The one body that remains the wrong body in women's sport is one that presents a 'natural' relationship to a masculinity linked to testosterone.

Part of establishing one's female identity in sport is centered around a 'natural' opposition to any (and all) association with a (physical and social) masculinity linked to testosterone. This has the effect of producing women as different from men, but not from 'real' women. Transsexual athletes who wish to compete in women's sport must present an 'unnatural' relationship to testosterone to be read as 'real' women. This not only applies to post-operative male-to-female athletes, but also to pre-operative female-to-male athletes, such as Keelin Godsey who serves as a primary example of a competitor whose (social) transition from female-to-male (through name and pronoun changes only) had no effect on his status as a female athlete because his relationship to testosterone remained the same. Godsey says

> There are no rules being broken. I am not doing anything illegal, anything wrong. I'm not doing anything other than going by a different pronoun and a different name (Oakes, 2006, p. 1).

Jeff Ward, athletic director at archrival Bowdoin College, says

> It's not an issue...there's no hormone replacement, how she chooses to identify herself, that doesn't have anything to do with what we do (Grossfeld, 2006, p. 2).
>
> This is a case of gender identity. Keelin simply has begun using the male pronoun while competing in women's track (Oakes, 2006, p. 2).

When Godsey was selected as one of the athletes of the week on the Bates College website, although Godsey is referred to using male pronouns, he remains identified with women's track and field.[7] Also, given that one male and one female athlete are selected for their accomplishments, the fact that there was another male athlete pictured beside him, indicates that he remains identified with other female athletes. Although, there are those who raise questions about the apparent duplicity of representing as a man while competing as a woman, Godsey is thought to present less of a challenge to competitive equity than he does to normative expectations of gender because his relationship to testosterone remains unchanged. As such, as long as he remains non-identified with testosterone, Godsey will remain identified with female sport participation.

Identity/Difference

A common thread in relation to any female athlete, who is perceived to present a challenge to competitive equity through non-normative expressions of sex and/or gender, is that questions regarding their motivations abound. As such, they are often required to defend their personal choices in relation to their sporting practices. Godsey asserts that he is only "doing what I'm doing only because I still want to compete...this was the only way I was going to do it, and the only way I could do it" (Oakes, 2006, p. 3). Mianne Bagger acknowledges that she's "a bit of a torchbearer... [But] fighting for the rights of

[7] Godsey's Athlete of the Week profile can be found at http://www.bates.edu/x111614.xml

transsexual women and fighting for a cause isn't really why I'm out there. I'm out there to play golf" (Anyone for tee, 2004, p. 2). More than any other competitor, Dumaresq has to defend her motivations to compete in the elite women's category in the sport of downhill mountain biking. In *100% Woman*, Dumaresq identifies as both a mountain bike racer and a woman, but says "the real thing is I want to race a bike."[8] One of her competitors, Sylvie Allen, doesn't buy it and questions if she is:

> Using this racing as a way to prove to the public, the world, that I am a woman? Look at me, I'm on a woman's podium, I've been given this medal, this acknowledgement? I'm just wondering what her reasons are. Recognition? Attention? It can't be just truly for the sport of it (Wilson and Duthrie, 2004).

To argue that Dumaresq can't be racing *truly for the sport of it* holds her to a higher standard than other female racers are subject to and also negates her identity as an athlete. Racers such as Allen obviously believe that their status as 'real' women precludes them from having to defend their own motivations as women and athletes, which places the onus on competitors, like Dumaresq, to convince others of her athletic integrity. While other racers may feel justified to question Dumaresq's motivations, there are no similar inquiries into their own participation and no questions about why they remain so invested in barring Dumaresq from competition. At the 2004 Canadian Championships in Whistler, B.C., Allen (who finished in 4th position and thus off the winner's podium) made the following statement:

> If this goes through today, then we could have a national champion in our country that is a transgendered female, or...I don't know what you call her...sorry. But, that person could be going to the World Championships this year and what are people going to think about women racing downhill (Wilson and Duthrie, 2004)?

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[8] This appears in a press release for 100% Woman Documentary at the Montreal Film Festival dated August 30, 2004 and on the cover of the DVD.

Allen's comments indicate that she is less concerned with Dumaresq racing in the elite women's category, than what her presence on top of the winner's podium represents: 'women racing downhill' (from Canada) at the World Championships. She fails to identify Dumaresq by name, but as a 'transgendered female (I don't know what you call her),' which implies that she should not be able to represent other 'women' racing. Claire Buchar had this to say in response to Dumaresq's win and her second-place finish:

> In my mind I think I won, and a lot of people had said that to me to, for example today my friend comes up to me and goes congratulations. You won, you're the first female. Hope Michelle didn't hear that, but she needs to know that's how people are feeling (Wilson and Duthrie, 2004).

However, given that Buchar made these statements after the race when being interviewed by the director of *100% Woman*, it is unlikely that her concern about whether or not Dumaresq heard those comments is genuine. In attempting to draw support from others for her 'real' female status, she attempts to absolve herself from her second-place finish and claim that Dumaresq is not worthy of the title of Canadian Women's Champion. Buchar takes great pride in being the *first female*, rather than the first-place finisher, to establish that these are mutually exclusive identities in Dumaresq's case and, as such, she considers herself more deserving of the title. Thus, Dumaresq's opponents not only question her right to compete, but challenge her very identity as a 'woman.'

Own(ing) the Podium

A similar incident ensued this past July at the 2006 Canadian downhill mountain biking championships in Whistler, BC. Danika Schroeter, second-place finisher to Michelle Dumaresq, was suspended by the Canadian Cycling Association (CCA) for wearing a t-shirt with the caption "100% Pure Woman Champ 2006" on it that her boyfriend has admitted to writing on her behalf, while supporters shouted insults and

obscenities at Dumaresq. Schroeter, and her supporters, opposed Dumaresq's presence on the winner's podium because in their view, she was born-male and therefore unlike the rest of the athletes in the elite women's category. Similar to Buchar who took great pride in being the first female at the National championships is 2004, Schroeter's is staking her claim to the identity 'woman,' which she believes Dumaresq can't, in an effort to establish herself as more deserving, of the National title. Cassandra Boon also feels this way: "I know what she is trying to do, I know what she wants, but she can't have it. In my mind, she can't." The "fact" that Dumaresq can't have what other racers can comes from the cultural acceptance of their ability to meet gendered expectations of womanhood that are socially assigned to female bodies. Dumaresq wasn't born a 'man', anymore than her competitors were born 'women'. Perhaps the least convincing argument in support of this position is that allowing Dumaresq to compete in and win the elite women's category tramples on other women's rights to do so. In *100% Woman*, Sylvie Allen makes this very point:

> I am a woman and I have rights too. I feel like we have no support from our cycling associations, they're just scared to get involved because of legal issues, but, I'm sorry, but my human rights are being violated as well.

It is unclear exactly what human rights she feels are being violated, unless 'real' women in sport have a right to first-place that other women in sport do not. Scott Humby, Sylvie Allen's husband, stated:

> The only way born-female athletes such as his wife have a fighting chance on the slopes is if they are competing against like-bodied athletes...they want a level playing field and they want to race against women...maybe Michelle's been altered to look like a woman, but she's not a woman (Bricker, 2002b, A03).

Humby's reference to 'like-bodied athletes' indicates his belief that racers born-female are at a disadvantage when matched in direct competition with races born-male. However, given that Dumaresq's body has 'been altered [through SRS] to look like a woman,' should qualify her as a like-bodied athlete in this regard. For Humby to claim that even with her transition from male-to-female she is "not a woman" indicates there must be something other than the physical body that sets her apart from other female-born athletes, such as his wife. In spite of these protests, Dumaresq remains eligible to compete in the elite women's category. However, members of the downhill mountain biking racing community continue to be vocal in their opposition to her competing against female-born participants. In particular, many refuse to allow her to lay claim to 'woman' as a gender identity, citing the fact that she has experienced a male relationship to testosterone that other female racers have not. This is a key factor which contributes to the construction of personal narratives by male-to-female athletes that attempt to eschew all ties to the male-sex hormone to be read as 'real' women. It comes as no surprise then that *100% Woman* is touted as an "adrenaline-fueled ride-along on Michelle's controversial foray into international women's competition," rather than one fueled by testosterone.

Testosterone is Destiny

The ability of male-to-female athletes to be read as 'real' women is largely dependent on their efforts to remain convincingly under the (physiological and psychological) influence of estrogen as opposed to testosterone. Male-to-female athletes are quick to establish that the effects of synthetic hormones, such as estrogen and progesterone, and 'naturalize' their bodies through SRS in the same way that occurs in

women who are female-at-birth. On the Vancouver-based talk show, *Vicki Gabereau Live*, Michelle Dumaresq was interviewed about her experiences as a transsexual athlete. In response to a comment about how the hormones she must take to maintain her legal status as a woman affect (drug) testing in her sport, she stated (laughing) "Estrogen in not a performance-enhancing drug." The obviousness of this statement did not go unnoticed by Gabereau, who then asked a question (half-joking) about whether "estrogen help[ed] in the welding" followed by another about her transitioning on the job. The point here is that performances linked to estrogen, the female-sex hormone, are constructed as inferior because they are 'naturally' free of testosterone. Some are careful to point out that the entry of male-to-female athletes into women's competitive sport should not be linked to female athletes from Eastern Europe who were (suspected) of taking male hormones.

> Male-to-female transsexuals go the opposite route: They take female hormones, and their testosterone levels drop sharply once their testes are removed. As Bagger, who transitioned a decade ago, explains, "estrogen is a performance-diminishing drug (Tuller, 2005, p. 1).

Female athletes, then, who meet male standards of superior performance (by performing like a man or beating other women), are deemed unfeminine or not 'real' women. Thus, inferior male and superior female athletes are seen to have an 'unnatural' relationship to testosterone. In this sense, it is clear that the assumption that sex and gender are inextricably linked also applies to sport performance:

In addition to distancing themselves from the physiological effects of testosterone, male-to-female athletes often make reference to the psychological changes that occur with estrogen. For example, in *100% Woman*, Dumaresq describes what happens "when you start the [sexual reassignment] process, one of the first drugs you take is an androgen blocker, which stops testosterone from being absorbed. You also start

taking estrogen and progesterone. That causes some pretty severe effects. Immediately, it changes everything, your skin, your hair, your height, your weight, your fat, your emotions" (Wilson and Duthrie, 2004). Dumaresq also experiences what it *feels like* to be a woman

> Fat has moved to her hips and buttocks, thanks to daily doses of estrogen and progesterone...She stops taking hormones four or five days a month to replicate a menstrual cycle. "The first two years are really tough," she says, "especially the mood swings. Men just don't understand what it's like (Billman, 2004, p. 3).

Here, she likens herself to other women who go through a menstrual period every month, rather than men. Part of being a woman, therefore, is to understand what it feels like (replicate) menstruation similar to other women, however likely very different. Dumaresq also relates female hormones to mood swings and emotion. In response to the protest that took place at the 2004 National Championships in Whistler, B.C., Michelle made the following comment:

> You can't help but being hurt, a little bit...This is what I worked for, really hard. I'm just really, really, really happy. I'm totally crying. This is crazy. ESTROGEN (Wilson and Duthrie, 2004).

Here estrogen is presented in a cause and effect relationship to crying: emotional displays, such as crying, are 'natural' as opposed to 'social' constructs, which are directly related to the presence of estrogen in the female body. Further, for "crying" to be "crazy" suggests that estrogen causes these emotions in female athletes and are psychologically out of their control.[9] Thus, 'real' women cry because their 'natural' relationship to estrogen causes them to and 'real' men do not cry because their 'natural' relationship to

[9] I am not suggesting that Dumaresq made these comments with an ulterior motive or that she doesn't genuinely experience these emotions. My purpose here is to represent what is being said and how these types of comments function within the discourse concerning male-to-female athletes, in particular.

testosterone prevents them from doing so. In an article for *Outside Magazine*, Michelle provides a description of the men she works with:

> They all know my story," she said of her fellow metalworkers. "They're great guys and are cool with it." Vancouver is a liberal city, but this is a metal shop with heliarc welders and forklifts and truckloads of aluminum tubing. "You can't cry here; it's unacceptable (Billman, 2004, p. 2).

However, it's not clear if Dumaresq does cry here even though she can't. In other words, if crying in a men's space is unacceptable, and she doesn't do it, but crying in a women's space is expected, and she does, it undermines her assertion that crying is related directly to estrogen. Mianne Bagger also talks about the changes estrogen has caused her psychologically. In statements on her website regarding the transition process about male golfers having a sex change to compete on the women's tour, she states two things in relation to estrogen and emotion.

> Through the usual course of Hormone Replacement Therapy (HRT) for transitioning women, basically, our level of estrogen (female hormone) is increased and our production of testosterone is reduced. These hormones are responsible for significant changes to our mental, emotional and physical state. Although the mental and emotional changes affect the way we approach daily tasks (and possibly sport)[10]

> Besides the physical changes to his body, chances are he will become an emotional wreck. So much so I doubt he would even have the mental and emotional capacity, or ability, to function in society, let alone play a game of golf...and a tournament one at that. [11]

While Dumaresq links estrogen to crying, Bagger attributes female hormones to breakdowns in mental and emotional capacity and possibly to the way one approaches sport, which further contributes to the perception that female athletes are 'naturally' inferior to male athletes given that estrogen dominates their hormonal makeup. Dr. Oliver

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[10] Statements taken from Bagger's website located at http://www.miannegolf.com/ under the "some facts" section.
[11] ibid

Robinow, of Vancouver Hospital's sex medicine clinic says, "Males growing up with testosterone are inevitably more driven, challenging, competitive than women...This decreases with their change in hormones, but does not disappear" (Billman, 2004, p. 3). Thus, male aggression in Dumaresq's (now) female body is problematic, given that her competitors are lacking in male aggression, which puts them at a disadvantage. Dumaresq does not deny she enjoyed

> being male, that enjoyed the camaraderie that goes along with it, and the aggression and all that, but that's only part of it, I think I'm not a man because I enjoy being aggressive. I'm just an aggressive woman (Wilson and Duthrie, 2004).

Thus, a male aggression (linked to testosterone) in a female body (linked to estrogen) cannot exist in 'real' women. Regardless of how Dumaresq identifies herself as 'not a man,' but 'an aggressive woman,' she remains unconvincing. It is, perhaps, the comments surrounding risk that are most interesting. Although Dumaresq claims to be "mentally capable of going fast," she says her approach to risky situations has changed in addition to "losing much of her testosterone,"

> I find myself thinking about things before I do them," she says. "Guys have this unique risk-taking ability that comes with testosterone. They deal with consequences after. Women always examine the consequences beforehand, analyze them and then take a calculated risk. I think that's the biggest difference between how I used to be and how I am now (Reifer, 2003, p. 3).

The perception that men, under the influence of testosterone, are more aggressive risk-takers, than women who, under the influence of estrogen, are more calculated risk takers is also key in producing male-to-female athletes as different from men, but not from other women. While male-to-female athletes establish a 'natural' relationship to estrogen, female-to-male individuals establish a 'natural' relationship to testosterone, in

much the same way. However, given there are no female-to-male athletes who have used testosterone for the purposes of transition to compete as male in men's sport, narratives on the effects of synthetic testosterone in the female-sexed body occur outside of sporting contexts.

In addition to the *New York Times* article by Andrew Sullivan (2000), another more recent text has been included here: "The Testosterone Files: My Hormonal and Social Transformation from female to male," by Max Wolf Valerio (2006). Valerio makes similar claims about the effects of synthetic hormones, which he takes as evidence that testosterone 'naturalizes' his body in the same way that occurs in men who are male-at-birth. He attributes physical power in men and emotional weakness in women, to testosterone, which he takes as confirmation that male behavior is rooted, in large part, biologically. For him, the use of testosterone has made him realize that estrogen equals emotion, sensitivity, and volatility (p. 304); vulnerability and moodiness (p. 305); estrogen-driven mood swings and crying jigs (p. 309).

> Emotionally, I do have a thicker skin now...I can shrug off hurt feelings a lot easier than I ever could before (p. 309).

> Women's arguments now often appear to me to be informed more by emotion than logic (or at least by as much emotion as logic...On estrogen, everything had an emotional weight...Women live inside an emotional realm that men cannot even completely imagine. It is lost to us (p. 309-310).

In contrast, testosterone has allowed him to "actually become chemically, hormonally male and transform physically into a man" (p. 2), and has caused: the end of tears (p. 302); detachment and emotional distance, thicker skin, an emotionally self-sufficient and independent loner (p. 310); and made it much more difficult to

communicate with women (p. 333). He also describes the physical effects in the following passage:

> When I go to they gym now, I find that I progress much faster. I've gone from lifting 50 to 120 pounds on a machine in two weeks. My muscles pump up faster and so the results are easier to see. Testosterone is anabolic and creates muscle from protein, So these results, while seemingly spectacular, are not unusual... [men] generally have less fat on their bodies, and the muscles tend to be larger (p. 325).

There are a few problems with these statements. First, his rapid strength increases are not directly related to testosterone. They are likely a function of neurological adaptation (beginning trainers usually experience this), intensity from one session to the next (50 lbs may have been too light to start with and 120 lbs may be done for fewer reps than before) and, depending on the machine, 50 to 120 may not be a difference of 70 lbs, but rather 7 units of varying weights. Second, while testosterone is anabolic, it does not create muscle from protein: it uses protein to repair damaged muscle, which offsets muscle loss in conjunction with diet and training that doesn't support muscle breakdown. In other words, muscle gain is caused by not muscle loss through the catabolic mechanisms in the body. Third, these spectacular results are not typical results for men who train with weights. Most men have a very hard time putting on muscle and gaining size and strength, even with all the 'natural' testosterone coursing through their bodies.

However, the more problematic statements include ones like "By becoming a man, I became all men" (p. 5), "testosterone shaped and revolutionized my perspective on life and my take on sexual politics from an explosive vantage point" (p. 9), and as my "body morphed, I was able, through astute observation, investigation, and constant questioning, to better comprehend the ways in which men and women are actually very different" (p. 9). Valerio is claiming that synthetic testosterone has given him an insight

into what it means to be a man, since he has become *all men*. Similar to Dumaresq, who knows what it feels like to be *all women* (who go through a menstrual period every month), the discursive effects of these comments 'naturalizes' his body in the same way that testosterone 'naturalizes' other male bodies. Part of being a man, therefore, is to understand what testosterone does for men (and makes them do) that is different from what estrogen does for women (and causes them to do). However, Valerio also makes another statement, which is significant.

> Everyone relates to other people and to the world in general from the vantage point of their physical body...it is a grounding element. Relating to a man as a man from a male body is very different from relating to a man as a woman from a female body (p. 193).

However, he fails to contemplate the ways in which the addition of synthetic testosterone to a female-sexed body may have differential biological and social effects than the 'natural' production of testosterone in a male-sexed body. For example, 'natural' and synthetic versions of the same hormones are actually very different. Many are structurally different, which produces individual, varying, and/or more extreme effects. These effects also vary according to the route of administration (injected, ingested, rubbed) and the present hormone levels of the body it is going into. If testosterone is being placed into a body in which its 'natural' levels are low (as in females), it may produce different effects than if it were being put into bodies in which its 'natural' levels were much higher (as in males). Similarly, although (some) women may experience increased emotions during their menstrual cycles, the addition of synthetic estrogen and progesterone to bodies is different when those bodies have 'naturally' occurring low levels (as in males). Further, hormones (estrogen, progesterone, and testosterone) exist in relation to one another. As such, the degree and severity of hormonal effects in

differently gendered bodies do not produce consistent results and may actually magnitude these 'natural' effects significantly. Therefore, whether or not individuals who use synthetic hormones for the purposes of transition indeed have the ability to 'know' what it feels like to be a man or a woman is unclear, however statements that attribute social inequality to biological determinants certainly requires additional critique.[12]

There are other problems with using transsexual narratives as evidence that the biological effects of synthetic testosterone justify social divisions between the sexes, because they 'naturalize' the presence and absence of testosterone in the male and female body respectively. In "The He Hormone," Andrew Sullivan (2000) argues that this "syringe full of manhood...helps explain, perhaps better than any other single factor, why inequalities between men and women remain so frustratingly resilient in public and private life" (p. 2). While Sullivan was born male, however, the fact that he was HIV positive and used synthetic testosterone "after a period of extreme fatigue and weight loss" (p. 2) should also be taken into account.

> What our increasing knowledge of testosterone suggests is a core understanding of what it is to be a man, for better and worse...to feel things no woman will ever feel to the degree that I feel them, to experience the world in a way no woman ever has (Sullivan, 2000, p. 16).

Statements like the one above attribute testosterone to male understanding and estrogen to female knowledge, that specifically link biology to the social experience of being either a man or woman. Using the 'natural' effects of synthetic hormones in this way, in addition to the trapped in the wrong body narrative, presents a number of problems for female athletes in general who encounter ongoing resistance to their the

[12] Where hormones are concerned, 'natural' actually refers to the biochemical nature of the molecule relative to the human body.

presence in mainstream sport because this discourse supports arguments that biology (testosterone) is destiny.

Biology is (not) Destiny

Narratives that attribute gender identity to natural and biological constructs appear to lie in direct contradiction to the biology is destiny[13] argument that some feminists studying sport seek to oppose. Discussion about the apparent limits of the normative athletic body (understood differently for men and women) has originated from particular feminist analyses that stress social constructions of behaviour in favor of biological determinants. Although (some) transsexual people and (some) feminists uphold the distinction between sex and gender in seemingly different ways, "both accuse the other of taking a bio-determinist view of gender:" the former is "seen to uphold society's gender status quo by changing their bodies to fit desired gender roles", while the latter "appear to invest in the same dominant discourse of dimorphic sex and binary gender" (Nataf, 1996, p. 446). However, one of the obvious problems with statements made by male-to-female athletes, such as Bagger, who argue that gender is not something brought about by learned behaviour or upbringing, is that it contradicts the feminist sport argument, which attributes women's athletic inferiority to social constructs. Under the "general" section of her website, Bagger says:

> It isn't merely a case of girls wanting to become boys because of playing with trucks or boys wanting to become girls because of playing with dolls...it goes far deeper than that. Many boys and girls go through these phases and do eventually grow out of them...Up to a certain age children are too young to know 'learned behaviour' and if given the opportunity, a child will behave and interact in a way that comes naturally to them.

[13] The idea that human society and behavior are to some significant degree determined by our biological inheritance.

Here the argument that gender identity is 'natural' gets conflated with gender roles, which some feminists argue are socially constructed. Thus, the fact that one 'feels' like a 'woman' should not be taken to mean that a 'woman' should 'feel' and/or behave in certain ways. In spite of which direction sex and gender appear to flow (or are distinct) from male to masculinity (man) and female to femininity (woman), establishing a 'natural' link between them connects women to an inferior athletic performance due to their lack of the 'male-sex' hormone. This creates a desire among 'real' female athletes to present the absence of masculinity in order to uphold their 'natural' inferiority to their male counterparts.

'Women' in Sport

The idea that some female participants willingly take on masculine characteristics to compete at the elite level is vigorously opposed by "some feminist groups who argue that men's sport is inherently undesirable and that women should build alternative models of sport which are intrinsically more humane and liberating" (Hargreaves, 1990, p. 293). While the equality of opportunity model relies on the essential sex differences between male and female athletes to support sex segregation and the gender equity model relies on the philosophy of separate development to make a case for an adapted model of sport, the radical feminist position enacts exclusionist policies to prevent women's sport from being assimilated into male structures. This model rejects characteristics normally ascribed to men, such as strength, competitiveness, and aggression, while celebrating characteristics normally ascribed to women, such as cooperation, weakness, grace and tenderness. There are a number of female athletes in this discourse who clearly feel that male-to-female athletes cannot claim the identity 'woman' because they were not brought up as women

(having been raised as males) and thus have a past (advantageous) relationship to testosterone that 'real' women do not.

Radical feminism

There are a number of feminists that feel segregating men from women's sport is the only way to centre women's experiences and have adopted an exclusionist policy that opposes men's control of sport (Hargreaves, 1990). Objections to the inclusion of transsexual athletes are based on the rationale that they are fundamentally different from other female athletes because they were raised with male privilege, which some may view as a threat to the physical and emotional safety for other women. While feminist sport organizations generally support the entrance of male-to-female athletes in women's sport, as long as they comply with the requirements set by the IOC, there are a number of female competitors who do not. What is interesting about those who stand in opposition to competitors such as Dumaresq and Bagger competing in 'women's' sport is that their arguments center around the desire to create a safe space based on past negative experiences with male dominance, which reflect a particular radical ideology that they may not identify with in other contexts. Kelli Sherbinin, a downhill mountain bike racer and opponent of Michelle Dumaresq's participation in the women's elite category, is one athlete that reflects this view. Although friends with Dumaresq, she explained that when...

> The UCI [Union Cycliste Internationale] ended up giving Michelle her license and for some reason when it became valid and okay by a governing body, all of a sudden, it became not ok for me. Something just didn't seem fair to me, it pushed a button that I couldn't really understand. The only way I could really describe it is, all of a sudden it took me back to years and years and years of feeling this difference between males and females. I was always told I should sit like a girl and I should act like a girl and I should do this like a girl. I've always been encouraged to be

> cautious you know, like, don't hurt yourself, you're meant to have babies. You know, you're the caregiver. You're not out there, the aggressor. I grew up with two older brothers in a neighborhood full of boys. On weekends, they'd play hockey, I'd sit on the sidelines. Throughout my experience, the boys' activities always dictated what was going to happen. Mountain biking felt like it took me away from being a woman and just let me be for the first time in my life. It allowed me to challenge my fears and so it liberated me in some sense. And then for Michelle to come in the picture, it felt like a male was coming into my territory and now I had to compete against a male, which I'd felt like I've been competing against my whole life. I had such a problem with it, I couldn't even, you know, actually continue a friendship with Michelle (Wilson and Duthrie, 2004).

These statements by Sherbinin reveal that for her, women's sport ought to be a safe place away from male dominance and control. The fact that Dumaresq was able to come into this space marked her as an intruder, which indicates that Dumaresq remains male-identified based on a history that SRS and HRT cannot overcome. However, this characteristic of sameness that Sherbinin feels with other female-born riders "based on common experience of oppression due to the social status of women" (Nataf, 1996, p. 441) may be an inaccurate reflection of the life histories of many elite female athletes who have exactly the opposite experience in sport.[14] These kinds of statements ignores the great many differences between women in terms of class, ethnicity, race, age, disability, and sexual orientation, among others, which despite the fact that women may share experiences that unite them as a group, detract from the totality of social relations which affects their involvement in sport (Hargreaves, 1990).

Michelle Dumaresq is not the first male-to-female athlete to find herself at the centre of a controversy for transgressing a space regarded for women-only (Hui, 2003).

[14] I do not mean to imply that Sherbinin's experiences are less worthy of reflection than others or that her feelings towards Dumaresq's participation in sport are invalid. The purpose of including these particular statements are to reflect a common theme in this discourse, that is, opposition to male-to-female athletes being able to compete in women's sport based on the need to reserve women's sport for female-born participants.

However, reserving women's sport for female-born participants creates, what Hargreaves (1990) would argue are unnecessary social divisions between different groups of women that fails to break down rigid sexual stereotypes which limit both sexes. The quest to construct a female athletic body that 'fits' with an internal sense of feminine gender identity has a number of material effects on women's bodies that appear 'real,' such as the perception of women's 'natural' athletic inferiority in many sports designed and reserved only for men.

There is an inherent contradiction in the use of sex hormones to determine the 'naturalness' of the athletic body, which inaccurately conflates femininity (gender) to an inferior sport performance. For example, testosterone is used to 'naturalize' a masculine gender presentation and male sport performance, while estrogen is used to 'naturalize' a feminine gender presentation and female sport performance. In this way, the discourse surrounding the use of testosterone by female athletes is differently gendered: the use of testosterone ('natural' or synthetic) by female athletes for sport (performance) is considered 'unnatural,' whereas the use of testosterone (synthetic) by female-to-male athletes is a way to 'naturalize' their transition to their proper gender.

Mianne Bagger and Michelle Dumaresq both reflect these discursive strategies through their public attempts to compete as women and athletes, while simultaneously 'naturalizing' their transition to 'proper' sexual identities through the use of synthetic estrogen and progesterone. Social ideas regarding sexual difference are still largely defined by assumptions that the failure of women to transcend sports social boundaries can be directly attributed to their biological 'lack' of testosterone. The 'natural' links between testosterone in males and masculinity in men are thought to extend into the

social realm, which is then used to explain why men control and dominate sport. If biology (male testosterone) *is,* in fact, destiny (superior sport performance), then women in sport are, and will remain, 'naturally' inferior athletes. Thus, while the entrance of transsexual athletes into international women's competition is both historical and controversial, attempts to affirm their female status may recuperate their struggles and accomplishments to some extent. However, it may just be their ability to enact the female apologetic, often identified by sport feminists as a strategy used by most female athletes to offset the association with masculinity and lesbianism that functions as a way to convince others of their 'real' woman in sport status.

'Real' Women in Sport

In Taking the Field, Michael Messner (2002) exposes the subtle and not-so-subtle ways in which men and women collectively construct gender through their interactions contextualized in the institutions and symbols of sport. He argues that despite profound changes, the world of sport largely retains and continues its longtime conservative role in gender relations. The overwhelming result of this research has shown that a masculinity linked to the presence of testosterone cannot reside 'naturally' on a female-sexed body. As such, this may be a significant contributor to the apparent conflict that exists between being a 'real' woman and/or athlete, which clearly defines the experience of most female athletes. One way female participants attempt to resolve this conflict is to use femininity as a 'cover-up' to (re)present the absence of masculinity linked to testosterone (muscular strength, physical development, aggression, competitiveness) that 'naturalizes' their 'real' women status. Similarly, male-to-female athletes, who use synthetic hormones to

'right' their 'wrong' bodies, are compelled to produce a structured narrative around their 'unnatural' relationship with testosterone to be read as 'real' women in sport.

Throughout this chapter, I have shown that the IOC policy on transsexual athletes relies on the social production of testosterone as the 'male-sex' hormone to establish real 'womanhood' in sporting contexts. The presumption that estrogen and testosterone 'naturalize' female and male gender identity respectively, inaccurately links female athletes to an inferior gender and sport performance that appears to flow 'naturally' from 'real' women in sport and not others. The logical outcome of the discourse surrounding gender identity suggests that we must question the investments of those who wish to (re)establish women's sport as a 'women's-only' space by using synthetic hormones to produce a female athletic inferiority that appears 'natural.'

Chapter 5

Summary and Conclusion

This chapter will examine the ways in which the privileging of testosterone as the 'male-sex' hormone has a number of discursive effects for women in sport. It is evident that assumptions that form the basis of the IOC policy in relation to the larger discourse fail and, as such, I conclude that testosterone acts as part of a disciplinary regime to produce and maintain gendered boundaries between differently sexed bodies in order to uphold the 'natural' superiority of the male athlete. There are three remaining problems in this discourse outlined below.

Segregation is Segregation[1]

The first problem remaining in this discourse is that is the rationale for separate, but equal, participation is undermined when testosterone is used arbitrarily to segregate athletes based on sex in those sports which are unaffected by the gender of the participants (in which testosterone is said to be unrelated to the final outcome) when there is no physiological reason to do so. Thus, the question of whether it is *fair* to exclude male-to-female athletes from women's sport is meaningless unless we also consider whether it is *fair* to discriminate against female athletes based on birth sex, regardless of the gender of the participants, particularly in contexts when there are no physiological reasons to do so. The segregation discourse mirrors, in many ways, proponents of sex segregation who often appeal to hypothetical scenarios where top male athletes totally obliterate female competitors in direct competition. They imagine scenarios such as Michael Jordan playing in the WNBA, Carl Lewis walking away with the women's 100m

[1] This statement is drawn from an article by Ann Travers (2006) titled "Is Segregation Segregation?" awaiting publication.

final at the Olympics (Teetzel, 2006) or men entering women's boxing matches just to beat up their girlfriends. However, the fact that black male athletes are often identified here is significant. In "The He Hormone," Andrew Sullivan (2000) argues that without "the central biological difference" between the sexes, regarding male and female testosterone levels, "it would be hard to justify separate sports leagues for men and women" (p. 11).

> Since most men have at least 10 times as much T as most women, it therefore makes sense not to have coed baseball leagues. Equally, it makes sense that women will be underrepresented in a high-testosterone environment like military combat or construction...gender inequality in these fields is primarily not a function of sexism, merely of common sense (Sullivan, 2000, p. 11).

However, he finds the racial gap in testosterone even more unsettling.

> Several solid studies, published in publications like Journal of the National Cancer Institute, show that black men have on average 3 to 19 percent more testosterone than white men. This is something to consider when we're told that black men dominate certain sports because of white racism or economic class rather than black skill (Sullivan, 2000, p. 11).

These statements reveal an important contrast in how testosterone is represented differently in terms of race vs. sex. Despite arguments that testosterone levels in men are 10-20 times higher than in women and testosterone levels in black men are 3-19 times higher than in white men, segregation based on sex is justified, but segregation based on race is not. Sullivan indicates that black male domination in certain sports is 'natural,' although not sufficient to prevent direct competition between differently raced men. However, men's presumed domination in sport in general is sufficient to warrant indirect competition between the sexes prior to any evidence that would support it (Hood-Williams, 1995), which produces a male athletic superiority that appears to reside 'naturally' on the male-sexed body. Aiken (2006) reflects this view that while other

factors contribute to athletic success, such as coaching, proper nutrition, good sports administration, and adequate funding and facilities, the "testosterone receptors of blacks are different genetically to those of whites and this difference confers increased responsiveness to testosterone" which produces these athletes as 'naturally' superior.

In terms of race, testosterone is used to explain black male domination, but not being used to justify racial segregation, when, according to this discourse, there are physiological reasons (or the same physiological reasons) to do so. The fact that testosterone does not 'naturally' divide race, as it does sex, indicates that racial inequality is social and discriminatory, but gender inequality is 'natural' and unbiased. The notion that separate-but-equal is socially unacceptable in regards to racial segregation, but is employed to justify sex segregation, indicates that using testosterone to arbitrarily segregate athletes is a social decision based on factors other than competitive advantage. That Entine (2000), Sullivan (2000), and Sailer (2000) would agree that attributing biological facets of human nature in social constructs is politically motivated and reflects ideology simplicity, in my view, there can be no more simpler explanation for everything sports-related than to blame testosterone. Although Sullivan (2000) argues

> The sports world offers one way out. Men and women do not compete directly against one another; they have separate tournaments and leagues [but] at some basic level, of course, men will always be better than women in many of these contests. Men run faster and throw harder. Women could compensate for this by injecting testosterone, but if they took enough to be truly competitive, they would become men, which would somewhat defeat the purpose (p. 13).

This statement is indicative of the belief that the addition of testosterone to the body of a male athlete gets used for performance-enhancement, while the addition of

testosterone to the body of a female athlete gets used for sexual reassignment, which is the second problem remaining in this discourse.

Muscle is NOT a male secondary sex characteristic

Although athletes who use testosterone and its derivatives for the purpose of performance-enhancement are said to engage in the 'unnatural' practice of doping, the discourse surrounding drug use in sport is differently gendered. As such, testosterone use for women in sport produces them as competitors who have also transgressed the sexed and/or gendered boundaries of what it means to be female (Magdalinski, 2001). This is achieved in and through false representations of the 'natural' link between testosterone and synthetic hormones in the male athletic body and the absence of narratives by female athletes who have used synthetic hormones to enhance performance, rather than for the purposes of transition. In an article called "Taking it like a woman," Matthew Stuart (2006) draws a comparison between the former presence of testosterone in Michelle Dumaresq's body and the U.S. cyclist Floyd Landis, who tested positive for testosterone at the 2006 Tour de France where he claimed victory. Stuart finds it strange that Landis "wins cycling's most grueling race with the hip of an 80-year old and is pilloried for having possibly elevated testosterone levels", while Dumaresq "who used testosterone all her life is shielded from any comments that might hurt her feelings" (p. 1).

The association between Dumaresq and Landis fails for a few reasons. One, the IOC does not test competitors on their history of testosterone use, whether 'natural' or synthetic. Athletes are tested at each event they are scheduled to compete in and, in many cases, by their national federations outside of competition. Both Dumaresq and Landis were tested at their events; the former passed and the latter failed. Two, Dumaresq's

testosterone levels ('natural' and synthetic) were at or below other female athletes in the race. Landis' testosterone levels ('natural' and synthetic) were elevated above the allowable 6:1 ratio and thus beyond his closest rivals.[2] Three, Dumaresq hasn't had testosterone in her system for over 10 years.

Even if both athletes had failed their drug tests, they would have been eligible to resume competing after a two-year period. The rationale behind a suspension of two years is that this agreed upon length of time it takes to clear exogenous testosterone from the athlete's system, which coincides with the 2-year waiting period male-to-female athletes must complete in order to reduce any gender-related physical advantages they would have had being male. Finally, Dumaresq has abided by the rules put in place by the IOC without fail, whereas Landis is implicated in intentionally dismissing these rules. This strategy of using a past male relationship with testosterone as evidence that male-to-female athletes are guilty of doping unfairly hinders their participation in women's sport.

Although research has shown the many benefits that testosterone (natural and synthetic) has for increasing muscle size, strength, and power, which are all key variables in athletic performance, it has not shown that any, or all, of these find themselves exclusive to the male-sexed body. And, while testosterone has both androgenic (maturation of the sex organs, deepening of the voice, beard and facial hair growth) and anabolic (growth of muscle mass, increased bone density and stimulation of linear growth and bone maturation) effects, many of the former fall into the category of male secondary sex characteristics. In other words, the androgenic functions of testosterone do not

[2] That is not to assume that Landis was the only competitor in the race whose testosterone levels failed to meet the allowable 6:1 ratio. Given the problems associated with drug testing in general, I make this statement only because his tests came back positive.

include the maintenance or development of muscle tissue, thus, muscle is not a male secondary sex characteristic.

The absence of narratives produced by, and about, female athletes whose use testosterone for sport performance, rather than sexual transition, is a glaring omission in this discourse. Given the way that drug use is constructed as more 'unnatural' for women than it is for men and the disciplinary performativity of femininity is demanded of all female athletes, it is unlikely that we will see any narratives produced in the near future dealing drug use by competitors at the elite level. Given the large number of female athletes[3] who have, or are currently on, steroid regimens, research into this area is crucial to counter the perception that the use of steroids for performance-enhancement masculinizes[4] the female body in ways that can only be justified for the purposes of sexual reassignment. The outcome of which, I argue, would reveal that femininity is a literal and metaphorical 'cover-up' that attempts to (re)present the absence of masculinity (related to the effects of testosterone) on the 'natural' female-sexed body.

That the anticipated responses of arguments to allow female athletes to use testosterone include social opposition based on subjective assessments of the horrors of masculinized females, she-males, and/or women in sport looking/talking/acting like men, indicates that society fears gender transgression more than sexual transition. Where justice, fairness and equality are concerned, blanket opposition to female athletes using testosterone to enhance performance is theoretically insupportable (Derenzo and

[3] Particularly in the sports of track & field, power lifting, football, etc., and those who use steroids for aesthetic purposes such as bodybuilding, fitness and figure competitors, among others.
[4] There are a number of synthetic steroids which have been developed to maximize the anabolic properties of testosterone, while minimizing the androgenic effects in ratios that favour their use by female athletes. For examples, see profiles posted as www.steroid.com.

Szafranski, 1997) given the potential of its use to reduce gender inequalities in sport is a logical outcome of this debate.

Women's sport is not a 'women's-only' space

The third remaining problem in this discourse is that some female born athletes are invoking notions of 'real' womanhood to support their claims that women's sport should remain a 'women's-only' space. This is achieved through the consistent use of language and representations that are clearly transphobic when made only in reference to male-to-female athletes, who are not 'real' women. In the same article by Stuart (2006) mentioned above, in addition to aligning Dumaresq with other drug cheats, he argues that one of her opponents, Danika Schroeter, was "disciplined like a cranky kindergartner...after she dared speak out against the use of performance-enhancing hormones [by Dumaresq] when she ascended to the second tier of the winner's platform wearing a T-shirt reading, "100% Pure Woman Champ 2006" (p. 1). On its surface, Schroeter's claim of "100% Pure Woman Champ 2006" may appear to be an allegation about doping. But Amateur (2006) argues "Schroeter isn't claiming to be more *virtuous* than Dumaresq; she's claiming to be more *female*, since Dumaresq does not have two X chromosomes" and presumably[5] she does. In essence, Schroeter is staking her claim to the identity 'woman,' which she believes, Dumaresq cannot due to her XY chromosomal makeup.

Although Schroeter attempted to frame the incident in terms of a political statement, rather than face accusations that Michelle was their intended target of a 'hate' message, her strategy fails for three reasons. One, Dumaresq is the only athlete whose

[5] I use 'presumably' here because it is not clear if Schroeter has been subjected to DNA testing that would either prove or disprove the presence of two X chromosomes for the purpose of defining 'woman' along competitive lines.

'womanhood' has been called into question based on her transsexual status; two, Schroeter's claim of "100% Pure Woman Champ 2006" as the runner-up, is relative only to Dumaresq who finished ahead of her; and three, Schroeter has created a category within the elite women's category in which only one competitor could be excluded. Further, given that Dumaresq has won the national title since 2004, making this at least the third time she has stood on top of the winner's podium, and arguably more under protest, it's hard to believe that Schroeter was 'shocked' at the message printed by her boyfriend and given to her to wear. Clearly, to argue that this was a 'political' message not directed 'personally' at Dumaresq is unsupported. Apparently, the fact that Dumaresq complained to the Canadian Cycling Association about the incident inspired the article's title "Taking it Like a Woman." Stuart concludes "that even plastic surgery can't give you thick skin" (p. 1). Thus, while the title of the article functions as a pathetic attempt to affirm Dumaresq's status as a woman, the final statement reduces her transition to a surgical procedure that is not proof (enough) of 'real' womanhood.

Those who defend Schroeter, also defend her right to claim that women's sport is a 'women's-only' space. In "Keeping up with the gender-benders," Cosh (2006) claims that the main reason Schroeter has become an "object of denunciation in the world press" is not due to her lack of sportsmanship:

> She is, rather, an exemplar for the next great identitarian crusade. As racists, chauvinists and homophobes were once pursued past the ends of the earth; soon orthodox opinion will begin stigmatizing "transphobes" (p. 1).

Cosh also points out that Dumaresq's detractors have been unfairly labeled as 'transphobic.' However, despite other arguments made against Dumaresq competing against female-born participants, the message Schroeter sent by wearing a t-shirt that read

"100% Pure Woman Champ 2006" is that Dumaresq was not worthy of claiming the National Women's title because she was not a 'real' woman. Had the word "Woman" been replaced with "White" or "Heterosexual" (Amateur, 2006), Schroeter would have been characterized as racist or homophobic. Thus, given opposition to allowing Dumaresq to compete in the elite women's category was made in reference to her transsexual status (not a 'real' woman), rather than other markers of identity such as race, sex, or sexual orientation, 'transphobic' seems to be an appropriate label in this context.[6]

Missing in Action

There are a number of athletes missing from this research that constitute, what Sykes (2006) refers to as the excluded outside. As such, there are a number of absences, omissions, and exclusions from the discourse surrounding transsexual sport policy that have made this project less-than-inclusive. In *Outside Magazine*, Michelle Dumaresq acknowledges that she corresponds with transgender athletes from all over the world, "There are hundreds of athletes out there who have a trans history...but they're not telling anybody because of the implications" (Billman, 2004, p. 3).

The implications of coming forward, coming out, and being a target of unwanted media attention, among other things, mean that there are a number of trans athletes who have been excluded from this discourse intentionally or otherwise. Those individuals most represented (Mianne Bagger, Michelle Dumaresq, and Renée Richards) are from privileged speaking positions in Western society: white, middle-to-upper class athletes who participate in prestigious individual sports (golf, mountain biking, and tennis). Had this research been comprised of athletes from less affluent backgrounds and privileged

[6] I should note here that there is ample evidence of transphobia that runs throughout this discourse. I have left out a number of direct comments that refer to Richards, Dumaresq, and Bagger as: 'she-males,' 'the transgendered thing,' and 'the man with boobs,' among others.

racial status, and/or athletes who participate in mainstream team sports (basketball, rugby, and baseball), I believe this discourse would appear quite different.

For example, as a white, upper-middle class woman with a medical degree, Renée Richards had the financial resources to play a sport like tennis before and after transition (at Harvard, then at the elite level), which allowed to draw on funds she earned from a professional career for SRS and additional medical costs (Sykes, 2006). Michelle Dumaresq (Canada) and Mianne Bagger (Denmark) are citizens of countries where the cost of sexual reassignment surgery is covered, in part or in whole, by the government. If they were from other places in the world, the transitioning process would have been an obstacle to their participation in women's sport at the elite level. Further, despite the fact that gender testing during women's events no longer 'officially' takes place; female athletes internationally may still find themselves subjected to compulsory gender verification procedures. For example, Santhi Soudarajan, an Indian runner, who won a silver medal in the women's 800-meter run at the Asian Games, was stripped of her medal by the Indian Olympic Association for failing a gender test administered by the games' medical commission.[7]

Had these athletes been from Eastern Bloc nations, such as the former East Germany, or Communist countries such as China, who both have reputations for state-sponsored systems that 'artificially' dope their female athletes to compete against women from the West, nationalistic discourses would have been a prominent feature. In some underdeveloped nations, the notion that athletes will go to *any lengths*, including sexual reassignment surgery, to reap the glory of gold medals so lucrative in some poor nations

[7] Soudarajan was asked to take a gender test that revealed she had androgen insensitivity syndrome (AIS), which excluded her from the event.

(Roberts, 2004), would have a significant impact on evaluating the motivations of such athletes. Had these athletes been of African descent, the stereotype of the 'animalistic black'[8] rooted in hundreds of years of colonialism, slavery, and racism would invoke both the 'natural' superiority of black athletes and a fear of the male imposter linked to sexual predation. Thus, the discourses surrounding testosterone and transsexual sport policy presented in this thesis is far from complete. I believe that the social production of testosterone as the 'male-sex' hormone will, in the future, come into full view with the entrance of competitors from a greater diversity of backgrounds.

There are also a number of female athletes who should be included in this discourse based on their 'unnatural' relationship to testosterone such as Amelie Mauresmo (as an out lesbian with an muscular physique, often accused of 'artificially' elevated levels of testosterone and was called "half a man anyway" by Martina Hingis at the 1999 Australian Open tennis tournament); Venus and Serena Williams (whose 'unnatural' physiques with not 'normal' female body mass position them as men among women with steroid-laced muscle in professional tennis because black women are 'known' to have elevated testosterone levels in comparison to other women); and Chinese women who Robert Voy of the United States Olympic Committee (USOC) referred to as "chemically induced males, or androgynous hermaphrodites" (in Plymire, 1999) because of their use of performance-enhancing drugs even in those instances where athletes passed their drug tests. Therefore, to argue that the status of testosterone as the 'male-sex' hormone only affects transsexual athletes certainly does not apply.

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[8] In 2001, Sid Rosenberg was temporarily fired for calling tennis player Venus Williams an "animal" and remarking that the Williams sisters (Venus and Serena) were "animals better suited to pose for National Geographic than Playboy." Rosenberg insisted to New York's Daily News (6/7/01) that his comments weren't racist, "just zoological" (http://www.fair.org/index.php?page=3082).

Final Thoughts

This project does not deny that testosterone has physiological effects in the human athletic body, but contends that biological variation is regulated and controlled by environmental and socio-cultural influences which produce and maintain existing power structures. As such, the conclusions reached in this project should not be taken as arguments to:

1. *Completely remove segregation in sporting contexts.* However, female athletes who are willing and able to compete against men (and vice versa) should be allowed to do so. At present, segregation benefits male athletes and men's sport and presumes of outcome of direct competition between the sexes now and in the future.[9]
2. *Mandate or encourage the use of testosterone by female athletes in competition.* I make this argument only in reference to the notion that testosterone is solely responsible for the performance advantage that male athletes enjoy. If this is the case, and I don't believe it is, then sport governing bodies should allow female-to-male athletes to overcome this 'lack' in direct competition with men.[10]
3. *Prevent the formation and existence of women's teams and/or women's sport.* However, excluding male-to-female athletes from women's sport because they are not 'real' women is both unfair and discriminatory. This enacts a similar strategy used on female athletes by those outside of sport, which questions their womanhood and status as 'real' women because of their athletic prowess.

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[9] It is not my intent to reinscribe a normative masculine discourse here. Athletic potential and physical performance is always already coded masculine for a number of reasons, one of which is because women continue to be excluded from top performance levels.

[10] I do not believe that women should 'take on' masculine characteristics by using testosterone to compete with men.

Although the IOC Policy seems to challenge normative understandings about what it means to be a 'woman' in sport, by attempting to include those who fall outside of traditional sexed and/or gendered boundaries, it may be less progressive that we are led to believe. It is clear that the IOC upholds the distinction between sex, gender, and performance in traditional ways and acts as an extension of previous efforts to ensure that competition between men and women remains segregated along lines of 'natural' sexual difference. The fact that sport governing bodies require female-born athletes to transition from female-to-male in order to compete in direct competition with men indicates there are considerable investments in maintaining gendered boundaries through social policies designed to regulate access to the 'essence' of superior sport performance to male-sexed bodies.

Future Research

Discourses of testosterone have differential effects on athletes based on their sex, gender, and/or racial status. Although there is clearly a genetic contribution to the ability of individual athletes to excel at certain sports, social decisions to regulate sexual difference attributes genetics to gender and ignores larger gendered social relations, which provide equality for some and difference for others. The importance of this critique cannot be underestimated given that the use of testosterone to 'naturally' divide athletes into social categories of men and women is a very anti-feminist, essentialist view. Using testosterone as an arbiter of sexual difference continues to portray female athletes as inferior versions of the *real* thing and is detrimental to a diverse range of women. The view that there should *already* be a greater equality of results on the playing field because the social and economic barriers in sport have fallen (Entine, 2000; Sailer, 2000) is an

underhanded way to justify the status quo and ensure that those who derive the most benefit continue to do so.

In scientific research, cultural perception, and particularly in the highly sexed and gendered structure of sporting environments, the distinction between men/male and women/female is clearly linked to the social status of testosterone as the 'male-sex' hormone. Feminists studying sport need to problematize this *real* difference between male and female athletes by looking at how 'naturalness' is constructed in sport and confront the most taken-for-granted assumptions that support male athletic superiority. Part of this task could be readily accomplished through an intense critical engagement with a number of glaring inconsistencies and contradictions found in efforts to maintain the seemingly 'unnatural' relationship between women and testosterone.

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